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The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

DEPARTMENT OF AGRICULTURE

Commodity Credit Corporation

7 CFR Parts 1477 and 1478

RIN 0560–AD04

Disaster Payment Program and Tree Assistance Program for 1990, 1991, and 1992

AGENCY: Commodity Credit Corporation, USDA.

ACTION: Final rule.

SUMMARY: This final rule amends the regulations for the 1990, 1991, and 1992 Disaster Payment Program and Tree Assistance Program (TAP) as authorized by the Food, Agriculture, Conservation, and Trade Act of 1990 (1990 Act), the Dire Emergency Supplemental Appropriations Act of 1992 (1992 Act), and the Second Dire Emergency Supplemental Appropriations Act, Fiscal Year 1992.

This final rule: Includes an aquaculture provision for the disaster assistance program; makes technical changes to TAP to enhance the administration of the program; and sets forth the manner in which the application period for disbursement of the funds made available by these Acts will be conducted.

EFFECTIVE DATE: February 16, 1993.

FOR FURTHER INFORMATION CONTACT: Diane Sharp, Chief, Production Adjustment Branch, Cotton, Grain, and Rice Price Support Division, Agricultural Stabilization and Conservation Service (ASCS), United States Department of Agriculture (USDA), P.O. Box 2415, Washington, DC 20013–2415, telephone: 202–720–4696.

SUPPLEMENTARY INFORMATION:

Executive Order 12291 and Department Regulation 1512–1

This final rule has been reviewed under USDA procedures established in accordance with provisions of Executive Order 12291 and Departmental Regulation 1512–1 and has been classified as "major" since the program will have an annual effect on the economy exceeding $100 million. A final regulatory impact analysis is available from the above-named individual.

Regulatory Flexibility Act and Environmental Evaluation

It has been determined that the Regulatory Flexibility Act is not applicable to this final rule since the Commodity Credit Corporation (CCC) is not required by 5 U.S.C. 553 or any other provision of the law to publish a notice of proposed rulemaking with respect to the subject matter of this rule. An Environmental Evaluation with respect to the Disaster Payment Program has been completed. It has been determined that this action is not expected to have a significant impact on the quality of the human environment. In addition, it has been determined that this action will not adversely affect environmental factors such as wildlife habitat, water quality, air quality, and land use and appearance. Accordingly, neither an Environmental Assessment nor an Environmental Impact Statement is needed.

Federal Assistance Program

The titles and numbers of the Federal assistance programs, as found in the Catalog of Federal Domestic Assistance, to which this rule applies are: Cotton Production Stabilization—10.052; Feed Grain Production Stabilization—10.055; Wheat Production Stabilization—10.058; and Rice Production Stabilization—10.065.

Executive Order 12372

This program/activity is not subject to the provisions of Executive Order 12372 which requires intergovernmental consultation with State and local officials. See the notice related to 7 CFR part 3015, subpart V, published at 48 FR 29115 (June 24, 1983).

Paperwork Reduction Act

The amendment to 7 CFR 1477.5 set forth in this final rule contains one new information collection, Form CCC–441 Income, Crop Disaster Program Certification, that requires clearance by the Office of Management and Budget (OMB) under the provisions of 44 U.S.C. chapter 35. A request for emergency clearance has been submitted to OMB, requesting review of the information collection requirements by February 26, 1992.

The reporting requirements of the current regulations at 7 CFR part 1477 have been approved through March 1995, by the OMB and assigned OMB No. 0560–0050. These reporting requirements have also been submitted for review under this final rule. Form CCC–441, Application for Disaster Payment, was revised from that previously approved by OMB under the current regulations. No other reporting forms were modified. Public reporting burden for these collections is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, room 404–W, Washington, DC 20250; and to the Office of Management and Budget, Paperwork Reduction Project, (OMB No. 0560–0050), Washington, DC 20503.

5 U.S.C. 553

The 1990 Act provides that the regulations necessary for implementation of these programs are to be issued as soon as practicable and without regard to the requirements for notice and public participation in rule making prescribed in 5 U.S.C. 553 or in any directive of the Secretary of Agriculture.

Executive Order 12778

This final rule has been reviewed in accordance with Executive Order 12778. The provisions of this final rule do not preempt State law, and are not retroactive. Before any judicial action may be brought regarding the provisions of this final rule, the administrative appeal remedies at 7 CFR part 780 must be exhausted.

Background

Title XXII of the 1990 Act (Pub. L. 101–624) sets forth provisions for implementing a disaster assistance program for prevented planting and low yield losses to eligible producers of

1990 wheat, feed grain, upland and extra long staple cotton, rice, peanuts, sugar, tobacco, soybeans and sunflowers, minor oilseeds, nonprogram crops, including ornamental and nursery crops. In addition, tree owners who experienced losses of commercial orchard trees due to freeze or earthquake, or losses of commercial forest trees due to drought or earthquake who intend to re-establish their stands may also be eligible for cost-share payment under the TAP.

The 1992 Act (Pub. L. 102–229) made available $1.75 billion for losses associated with 1990 crops and trees as authorized by the 1990 Act and for losses associated with 1991 and 1992 crops and trees under the same terms and conditions as for 1990 crop losses. Of the $1.75 billion, $995 million is made available for payments to eligible producers for losses on either 1990 or 1991 crops on a farm, at the producer's option. The remaining $755 million has been made available as the result of an official budget request by the President that includes designation of the entire amount of the request as an emergency requirement as defined in the Balanced Budget and Emergency Deficit Control Act of 1985. Accordingly, this $755 million shall be available for crop and tree losses on a farm for one of the years 1990, 1991, or 1992, at the producer's option, but shall not be available for a year for which disaster payments were previously provided. As required by the 1992 Act, $100 million of the $755 million is for program crops planted in 1991 for harvest in 1992. The Second Dire Emergency Supplemental Appropriations Act, fiscal year 1992 (Pub. L. 103–368) authorized additional funds to cover crop and tree losses including aquaculture associated with natural disasters such as Hurricanes Andrew and Iniki or Typhoon Omar. Generally, the definitions used with respect to aquaculture are based upon the National Aquaculture Act of 1980, as amended. Also, Public Law 103–368 authorized a separate appropriation of $48 million to cover just losses under TAP due to hurricanes and typhoons. These additional funds will also be used to make assistance available for producers for losses of nursery inventory.

A final rule was published in the **Federal Register** on March 31, 1992, (57 FR 10960) to set forth at 7 CFR parts 1477 and 1478 the regulations necessary for implementing the Disaster Program and TAP. The provisions of this final rule: (1) includes an aquaculture provision for the disaster assistance program; (2) makes technical changes to TAP to enhance the administration of the program; and (3) sets forth the manner in which the application period for disbursement of the funds made available by these Acts will be conducted.

List of Subjects

7 CFR Part 1477

Agriculture commodities, Disaster assistance, Fraud, Grant programs—agriculture, Reporting and recordkeeping requirements.

7 CFR Part 1478

Disaster assistance, Grant programs—Agriculture, Reporting and recordkeeping requirements, Trees.

Accordingly, 7 CFR parts 1477 and 1478 are amended as follows:

PART 1477—DISASTER PAYMENT PROGRAM FOR 1990 AND SUBSEQUENT CROPS

1. The authority citation for 7 CFR part 1477 is revised to read as follows:

Authority: 15 U.S.C. 714b and 714c; Pub. L. 101–624 (7 U.S.C. 1421 note); Pub. L. 102–229, 105 Stat. 1701; Pub. L. 102–368, 106 Stat. 117.

2. Section 1477.3 is amended by:

A. Revising the definitions of "Actual production", "Crop year", "Eligible crop", "Nonprogram crop", "Person", and "Subsequent sign-up period";

B. Adding definitions for "Aquaculture", "Aquaculture facility", "Aquatic species", and "Final sign-up period";

C. Revising paragraphs (3) and (4) of the definition of "Disaster payment yield"; and

D. Revising the introductory text of paragraph (2) of the definition of "Expected production".

§ 1477.3 Definitions.

* * * * *

Actual production means the quantity of the crop actually harvested or which could have been harvested as determined by the county and ASC committee in accordance with instructions issued by the Deputy Administrator, State and County Operations (Deputy Administrator), Agricultural Stabilization and Conservation Service (ASCS). In the case of sugarcane, the quantity of sugar produced from such crop and shall exclude acreage harvested for seed.

Aquaculture means the propagation and rearing of aquatic species in controlled or selected environments, including, but not limited to, ocean ranching (except private ocean ranching of Pacific salmon for profit in those States where such ranching is prohibited by law).

Aquaculture facility means any land, structure, or other appurtenance that is used for aquaculture and is located in any State. Such term includes, but is not limited to, any laboratory, hatchery, rearing pond, raceway, pen, incubator, or other equipment used in aquaculture.

Aquatic species means any finfish, mollusk, crustaceans, or other aquatic invertebrate, amphibian, reptile, or aquatic plant.

Crop year means the year harvest begins for the crop. However, for valencia oranges harvested in 1991, 1992, and 1993, respectively, the crop shall be considered to be a 1990, 1991, and 1992 crop respectively.

Disaster payment yield means:

* * * * *

(3) For all kinds of tobacco, the county average yield of the 5 years prior to the applicable disaster year, as determined by NASS, excluding the year in which the yield was the highest and the year in which the yield was the lowest;

(4) For soybeans, sugarcane, sugar beets, and sunflowers, the average of the county average yield for the 5 years prior to the applicable disaster year as determined by NASS, adjusted for adverse weather conditions, in accordance with instructions issued by the Deputy Administrator; such county average yield for sugarcane shall exclude normal seed cane production;

* * * * *

Eligible crop means any of the 1990 through 1992 crops of wheat, feed grains, upland cotton, extra long staple cotton, rice, peanuts, oilseeds, sugarcane, sugar beets, tobacco, or nonprogram crops including ornamentals, nursery crops, and aquaculture.

* * * * *

Expected production means:

* * * * *

(2) For target price commodities on farms not enrolled in the applicable year's acreage reduction program and for acreage of program crops planted on farms enrolled in such programs which is in excess of the permitted acreage established for the crop in accordance with 7 CFR 1413.11; peanuts; sugarcane excluding seed cane acreage; sugar beets; soybeans; sunflowers; tobacco other than burley tobacco; and nonprogram crops, except as provided in paragraphs (3) through (5) of this definition, the disaster payment yield times the sum of:

* * * * *

Final sign-up period means the sign-up period beginning October 13, 1992, and ending on February 12, 1993, (or other such date as established by CCC)

for assistance to eligible producers who have incurred losses in 1990, 1991, or 1992 but shall not be for a year for which disaster payments were earned under the initial sign-up period.

* * * * *

Nonprogram crop means a crop (including ornamentals such as flowering shrubs, flowering trees, field or container grown roses, or turf, aquaculture and sweet potatoes) produced on a farm for sale or exchange on a commercial basis in a large enough quantity to have a substantial impact on the producer's income, as determined by the county ASC committee in accordance with instructions issued by the Deputy Administrator, which is not a crop of a target price commodity, quota or additional peanuts, sugarcane, sugar beets, tobacco subject to marketing quotas, soybeans or sunflowers.

* * * * *

Person shall mean a person as defined in part 1497 of this chapter, and all rules with respect to the determination of a person found in such part shall be applicable to this part. However, the determinations made in accordance with 7 CFR part 1497, subpart B, Person Determinations, shall include all entities in which an individual or entity has an interest, whether or not such entities are engaged in farming.

* * * * *

Subsequent sign-up period means the sign-up period beginning September 8, 1992, and ending on February 12, 1993, (or other such date as established by CCC) for assistance to eligible producers who have incurred losses on program crops planted in 1991 for harvest in 1992.

* * * * *

3. Section 1477.4 is revised to read as follows:

§ 1477.4 Availability of disaster payments.

(a) A person as defined in § 1477.3 who has qualifying gross revenues in excess of $2 million for the most recent tax year preceding the crop year for which benefits are requested shall not be eligible to receive disaster benefits under this part.

(b) Eligible producers with 1992 losses of production in excess of 65 percent of expected production must agree to obtain crop insurance, if available, any time during the subsequent or final disaster sign-up periods, under the Federal Crop Insurance Act for the 1993 crop of the commodity, unless one of the following exists:

(1) The sales closing date passed for the 1992 crop before October 13, 1992;

(2) Crop insurance is not available with respect to the commodity with respect to which a disaster payment is requested;

(3) The amount of the producer's annual premium rate is greater than 125 percent of the average premium rate on that commodity in the county in which the producer is located;

(4) The amount of the premium is greater than 25 percent of the amount of the disaster payment, deficiency forgiveness, or FmHA loans; or

(5) The county committee determines, based on an appeal by the producer, that the purchase of crop insurance would impose an undue financial hardship on the producer.

4. Section 1477.5 is amended by removing the word "and" at the end of paragraph (a)(3), by removing the period at the end of paragraph (a)(4)(ii) and replacing it with the words "; and", and by adding paragraph (a)(5) to read as follows:

§ 1477.5 Disaster benefits.

(a) * * *

(5) The farm operator submits a Certification of Income Eligibility (Form CCC–441 Income) in accordance with § 1477.4.

* * * * *

5. Section 1477.7 is amended by:

A. Revising paragraphs (b) and (d), and

B. Adding paragraphs (e) and (f) to read as follows:

§ 1477.7 Filing application for payment.

* * * * *

(b)(1) An application for payment must have been filed as soon as practical after the producer's eligibility has been established in accordance with § 1477.5(a).

(2) Applications for payments made during the initial sign-up period for 1990 and 1991 crop losses must be filed from February 3 through March 13, 1992.

(3) Applications for payments made during the subsequent sign-up period with respect to program crops planted in 1991 for harvest in 1992 must be filed from September 8, 1992, through February 12, 1993.

(4) Applications for payments made during the final sign-up period with respect to all other 1990, 1991, and 1992 crop losses must be filed from October 13, 1992, through February 12, 1993.

* * * * *

(d) For applications filed during the initial sign-up period, if a farm was operated in 1990 by an operator who was not the same operator on the farm in 1991, CCC will accept an application for disaster from both operators, but both operators must agree in writing by March 27, 1992, as to the year for which payment will be provided. If the operators cannot agree with respect to such selection, no payments will be made to any producer on the farm for either year.

(e) For applications filed during the subsequent or final sign-up periods, if a farm was operated in 1990, 1991, or 1992 by an operator who was not the same operator on the farm all years 1990, 1991, and 1992, CCC will accept an application in accordance with paragraphs (b)(2) and (b)(3) of this section from all operators, but all operators must agree in writing by February 12, 1993, as to the year for which payment will be provided. If the operators cannot agree with respect to such selection, no payments shall be made to any producer on the farm for any year.

(f) An operator who was approved to receive disaster benefits during the initial sign-up period and who only operated the farm for the year benefits were received, shall not be required to agree to the year for which payments shall be provided under paragraphs (b)(2) and (b)(3) of this section.

6. Section 1477.8 is revised to read as follows:

§ 1477.8 Availability of funds.

In the event the total amount of claims submitted under this part or part 1478 of this chapter during the initial sign-up period, the subsequent sign-up period, or final sign-up period respectively, exceeds the applicable funds available for such period such payments shall be reduced by a uniform national percentage. Such payment reductions shall be applied after the imposition of applicable payment limitation provisions.

7. Section 1477.9 is amended by revising paragraph (a)(1) to read as follows:

§ 1477.9 Report of acreage, production disposition, and indemnity payments.

(a)(1) Eligible producers shall report, in accordance with instructions issued by the Deputy Administrator, the acreage, production, and disposition of all commodities produced in an applicable year on an acreage for which an application for a disaster payment is filed. Such production reports submitted with respect to the initial sign-up period must be submitted by March 27, 1992; with respect to the subsequent sign-up period must be submitted by February 26, 1993; and with respect to the final sign-up period

must be submitted by February 26, 1993.

* * * * *

8. Section 1477.10 is amended by revising paragraphs (d)(2) and (e) to read as follows:

§ 1477.10 Payment limitations.

* * * * *

(d)(1) * * *

(2) Persons filing an application during the initial sign-up period who are subject to the provisions of paragraph (d)(1) of this section must elect the provisions under which such payments or benefits shall be received by notifying the county ASCS office by March 13, 1992. Persons filing an application during the subsequent or final sign-up period who are subject to the provisions of paragraph (d)(1) of this section must elect the provisions under which such payments or benefits shall be received by notifying the county office by February 26, 1993.

(e) All disaster program applications submitted in accordance with this part shall be totaled at the end of the application period. In order to ensure that there is no duplication of benefits, deficiency payments made in accordance with part 1413 of this title and emergency livestock feed program benefits made in accordance with part 1475 of this title shall not be made with respect to any loss of production for which assistance is requested under this part. Accordingly, the quantity of the loss of production otherwise eligible for disaster assistance under this part on which a producer had previously obtained a deficiency payment or an emergency livestock feed program benefit shall be reduced. In order to make such a reduction, the deficiency payments and emergency livestock feed program benefits shall be adjusted by a national factor obtained by:

(1) Dividing the sum of the applicable fund available and such reduced payments by

(2) The total amount of claims submitted during each applicable sign-up period. If the total amount of funds is insufficient to result in payments to producers at the rate of .5004, the Secretary shall use such funds of the Commodity Credit Corporation as are necessary to make payments at such a rate.

* * * * *

9. Section 1477.12 is amended by revising paragraph (c) to read as follows:

§ 1477.12 Misrepresentation, scheme and device, and fraud.

* * * * *

(c) If the county committee determines that any producer has adopted or participated in any practice which tends to defeat the purpose of the program established in accordance with this part, the county committee request the refund of all or part of the payments which otherwise would be due the producer under this part.

PART 1478—TREE ASSISTANCE PROGRAM

10. The authority citation for 7 CFR part 1478 is revised to read as follows:

Authority: 15 U.S.C. 714b and 714c; Pub. L. 102–624 (7 U.S.C. 1421 note); Pub. L. 102–229, 105 Stat. 1701; and Pub. L. 102–368, 106 Stat. 117.

11. Section 1478.1 is amended by revising paragraph (a) to read as follows:

§ 1478.1 General statement.

(a) The regulations in this part set forth the terms and conditions of the Tree Assistance Program (TAP) authorized by title XXII of the Food, Agriculture, Conservation, and Trade Act of 1990 (the 1990 Act). Within specified limits, the Commodity Credit Corporation (CCC) is authorized by the 1990 Act to:

(1) Reimburse eligible owners for part of the cost of replanting seedlings to offset losses by an eligible orchardist for trees that were planted in any year to produce annual crops for commercial purposes but were lost due to freeze, earthquake, or related condition in 1990, 1991, or 1992, or hurricane, typhoon, or related conditions in 1992; and

(2) Reimburse eligible owners for part of the cost of replanting seedlings which would have produced trees to be harvested for commercial purposes which were either planted in 1989 or 1990 and were lost due to drought, earthquake, or related condition in 1990 (1990 losses), or planted in 1990 or 1991 and were lost due to drought, earthquake, or related condition in 1991 (1991 losses), or planted in 1991 or 1992 and were lost due to drought, earthquake, or related condition in 1992 (1992 losses), or were lost due to hurricane, typhoon, or related condition in 1992. However:

(i) Such trees, seedlings or nursery inventory must be planted for commercial purposes and they may not be:

(A) Grasses or legumes grown in open field conditions; or

(B) Plants grown for shelterbelts and wildlife enhancement plantings; and

(ii) If the request for assistance is for:

(A) Trees planted to produce annual crops, the losses must be due to freeze, earthquake, hurricane, typhoon, or related condition;

(B) Seedlings planted to produce trees for harvest, the losses must be due to drought, earthquake, hurricane, typhoon, or related condition;

(C) Nursery inventory, the losses must be due to hurricane, typhoon, or related condition;

(D) Aquatic plants, the losses must be due to hurricane, typhoon, or related condition; and

(E) Trees which qualify as either nursery inventory or orchard trees, the owners must elect whether such trees shall be considered to be either, but not both, nursery inventory or orchard trees.

* * * * *

12. Section 1478.3 is amended in paragraph (b) by:

A. Revising the definitions of "Individual stand" and "Seedling",

B. Adding definition of "Nursery inventory", and

C. Revising the introductory text and adding paragraph (iii) in the definition of "Normal mortality" to read as follows:

§ 1478.3 Definitions.

* * * * *

(b) * * *

Individual stand means an area of eligible trees which are tended to by an eligible owner as a single operation, whether or not such trees or plants are planted in the same field or similar location, as determined by CCC. Differing species of trees or plants in the same field or similar area may be considered to be separate individual stands if CCC determines that the species have significantly differing levels of freeze, drought, earthquake, hurricane, or typhoon susceptibility.

* * * * *

Normal mortality means:

* * * * *

(iii) With respect to nursery inventory planted for commercial purposes, the average extent of plant death on the individual stand which normally would have occurred with respect to eligible nursery inventory during the 12 months previous to the loss with respect to which assistance is requested under this part without regard to any detrimental conditions which do not regularly affect nursery inventory survival rates in the local area, as determined by the county committee in accordance with instructions issued by DASCO.

Nursery inventory means all nursery crops grown for transplant or sale including ornamentals and field grown plants, and excluding open field grown sod, grasses, legumes, and similar plants as determined by DASCO.

* * * * *

Seedling means a tree or plant which was planted in the ground for commercial purposes.

* * * * *

13. Section 1478.4 is revised to read as follows:

§ 1478.4 Program availability.

A request for assistance under this part made available during the initial sign-up period must be submitted to CCC at the county office in the county where the farm is located by March 13, 1992, (or such other date as established by CCC). A request for assistance under this part made available during the subsequent sign-up period must be by February 12, 1993. Eligible owners shall not receive assistance under this part with respect to losses of seedlings or nursery plants:

(a) That were planted under the Conservation Reserve Program;

(b) That were the subject of any cost-share assistance or other assistance under any other Federal program, unless approved in writing by DASCO; and

(c) As determined eligible for benefits under part 1477 of this chapter.

14. Section 1478.5 is revised to read as follows:

§ 1478.5 Qualifying loss.

(a) A person shall be eligible to receive assistance under this part with respect to losses due to drought, freeze, earthquake, or related condition in 1990, 1991, 1992; in addition, losses due to hurricane, typhoon, or related condition in 1992, only if such owner is an eligible owner, as defined in this part and has sustained a qualifying loss or eligible trees, tree seedlings or nursery inventory as determined by CCC. The only type of losses which may be considered qualifying are the following:

(1) A loss by an eligible owner who is an orchardist who is the owner of eligible trees planted in any year for commercial purposes which are lost as a result of a freeze, earthquake, or related condition in 1990, 1991, or freeze, earthquake, hurricane, typhoon, or related condition in 1992 as determined by the county committee in accordance with instructions of DASCO;

(2) A loss by an eligible tree farmer who grows trees for harvest for commercial purposes and is the owner of eligible tree seedlings which were either planted in 1989 or 1990 and were lost due to drought, earthquake, or related condition in 1991, or planted in 1991 or 1992 and were lost due to drought, earthquake, or hurricane, typhoon, or related condition in 1992 as determined by the county committee in accordance with instructions of DASCO; or

(3) A loss by an eligible owner who grows nursery inventory for commercial purposes which is lost as a result of freeze, drought, earthquake, hurricane, typhoon, or related condition in 1992 as determined by the county committee in accordance with instructions of DASCO.

(b) Qualifying loss determinations shall be made on an individual stand basis. A qualifying loss shall be the loss for the individual stand of eligible tree seedlings, eligible trees, or eligible nursery inventory, as appropriate, after taking into account the normal mortality of such seedlings, trees or nursery inventory, as appropriate, on such stand, in excess of 35 percent mortality (adjusted for normal mortality). Qualifying losses shall not include losses which could have been prevented through readily-available horticultural measures.

(c) When visible evidence of losses no longer exists on the site where the trees were planted, acceptable evidence as determined in accordance with instructions issued by DASCO must be established for COC to qualify the individual stand for the program.

15. Section 1478.6 is revised to read as follows.

§ 1478.6 Eligible costs.

(a) Payments under this part shall be made by CCC and may be made only to the extent that payment is specifically provided for in this part. CCC shall, under this part, to the extent of the availability of funds, reimburse an eligible owner for 65 percent of the eligible costs of re-establishing seedlings, trees, or nursery plants, not in excess of the number of seedlings, trees, or nursery plants constituting the qualifying loss. Such reimbursement may be based on average costs or the actual costs for the replanting practices, as determined by CCC. If the costs are to replace lost trees, or nursery plants, the costs shall only be for replacement seedlings or plants of a size and quality determined by CCC to be sufficient for that purpose. The costs for which cost-sharing shall be permitted shall only be the costs which are the cost of the seedlings or nursery plants, tree or plant rehabilitation measures, site preparation measures that are both normal cultural practices for the type of individual stand being re-established and necessary to ensure successful plant survival, chemicals and nutrients if needed to ensure successful plant survival, labor used to physically plant or rehabilitate such seedlings as based on standard labor rates as determined by the county committee and nursery plant containers and tree wraps. Eligible costs specifically exclude items such as fencing, irrigation, irrigation equipment, measures to protect seedlings from wildlife, and general land and tree stand improvements, and re-establishing greenhouse structures and windscreens.

(b) Eligible costs shall not include costs incurred for replanting species of seedlings or nursery plants differing significantly from the species of the seedlings, trees, or nursery plants constituting the qualifying loss except as approved by CCC. If such substitution is approved, eligible costs shall be the lesser of:

(1) The actual eligible costs incurred; or

(2) The estimated eligible costs which otherwise would have been incurred.

(c) Eligible costs shall only include costs approved within the limits set by this part including, but not limited to, those limits set forth in paragraph (a) of this section. Eligible costs include costs incurred before an application for payment is submitted to CCC. Eligible costs shall only include those costs for which the eligible owner has submitted documentation determined by CCC to adequately document such costs.

(d) The amount of assistance which shall be paid by CCC, shall not exceed the lesser of 65 percent of the eligible costs actually incurred by an eligible applicant from replanting the qualifying loss, or 65 percent of the estimated average cost to replant or rehabilitate the qualifying loss, as established by CCC.

16. Section 1478.8 is amended by revising paragraphs (d) and (e) to read as follows:

§ 1478.8 Obligations of an eligible owner.

* * * * *

(d) Eligible owners are not required to implement replanting practices before payment is provided by CCC. Eligible owners who are paid before they implement their practices will be given 24 months after the end of the applicable sign-up period to complete their practices. In cases where delays beyond this practice expiration date occur, State committees may grant up to an additional 24 months. Further extensions may be provided by DASCO. Eligible owners who have been paid who choose not to implement their practices by the final practice expiration date are required to refund their payments with interest. Such refund amounts may be reduced by CCC, at CCC's discretion, when only part of the required replanting practice is not implemented.

(e) Eligible owners must allow representatives of CCC to visit the site for the purposes of quantifying mortality and certifying practice completion.

17. Section 1478.9 is revised to read as follows:

§ 1478.9 Payment limitations.

(a) The amount of payments which any person, as determined in accordance with part 1497 of this chapter, may receive under this part in connection with losses of trees planted to produce annual crops shall not exceed $25,000 for 1990 losses due to freeze, earthquake, and related condition; $25,000 for 1991 losses due to freeze, earthquake, and related condition; $25,000 for 1992 losses due to freeze, earthquake, and related condition, and $25,000 for 1992 losses due to hurricane, typhoon, and related condition, respectively.

(b) The amount of payments which any person, as determined in accordance with part 1497 of this chapter, may receive under this part in connection with losses of trees planted to produce trees for harvest shall not exceed $25,000 for 1990 losses due to drought, earthquake, and related conditions; $25,000 for 1991 losses due to drought, earthquake, and related condition, $25,000 for 1992 losses due to drought, earthquake, and related condition, and $25,000 for 1992 losses due to hurricane, typhoon, and related condition, respectively.

(c) The amount of payments which any person, as determined in accordance with part 1497 of this chapter, may receive under this part in connection with losses of nursery inventory shall not exceed $25,000 for 1992 losses due to hurricane, typhoon, and related condition.

Signed at Washington, DC, on February 12, 1993.

Bruce R. Weber,

Acting Executive Vice-President, Commodity Credit Corporation.

[FR Doc. 93–3853 Filed 2–16–93; 12:19 pm]

BILLING CODE 3410–05–M

SMALL BUSINESS ADMINISTRATION

13 CFR Part 121

Small Business Size Regulations; Termination of Waiver of the Nonmanufacturer Rule

AGENCY: Small Business Administration.

ACTION: Notice to terminate the waiver of the Nonmanufacturer Rule for mainframe computers and certain associated peripheral equipment acquired on the same procurement.

SUMMARY: The Small Business Administration (SBA) is terminating its waiver of the Nonmanufacturer Rule for mainframe computers and certain associated peripheral equipment acquired on the same procurement. The SBA is terminating the waiver due to the potential difficulties in formulating a workable definition of the term mainframe computer. The SBA now believes that the confusion surrounding the term and varying marketing strategies used by computer manufacturers could result in an uneven application of the waiver and the possibility that small business manufacturers of computers may be harmed by the existence of the waiver.

DATES: May 20, 1993.

FOR FURTHER INFORMATION CONTACT: James Parker, Procurement Analyst, phone (703) 695–2435.

SUPPLEMENTARY INFORMATION: Public Law 100–656, enacted on November 15, 1988, incorporated into the Small Business Act the previously existing regulation that recipients of Federal contracts set aside for small businesses or SBA 8(a) Program procurement must provide the product of a small business manufacturer or processor. The SBA regulations imposing this requirement are found at 13 CFR 121.906(b) and 121.1106(b). Section 303(h) of the law provides for a waiver of this requirement by the SBA for any "classes of products" for which there are no small business manufacturers or processors in the Federal market. Section 210 of Public Law 101–574 further amended the law to allow for waivers for classes of products for which there are no small business manufacturers or processors available to participate in the Federal procurement market.

The SBA published a notice of a decision to waive the Nonmanufacturer Rule for the class of products of mainframe computers under Product and Service Code (PSC) 7021 in the **Federal Register** on August 28, 1991, p. 42524–42526.

Our decision to terminate the waiver earlier issued on August 28, 1991, for mainframe computers as a class of products has been made after careful consideration of facts which have recently become apparent to the SBA. Since the waiver for mainframe computers was published, the SBA has been asked on a number of occasions for a definition of "mainframe computer" and for descriptions of the type of equipment covered by the waiver. The SBA has also been asked if the waiver covers mainframe-class or mainframe-like products, and items such as supercomputers and superminicomputers that are marketed as mainframe-equivalents or in the mainframe "family." Further, the SBA has been asked if additional peripheral equipment can be purchased "after the fact" for a mainframe computer where the waiver was originally applied.

In an effort to provide a consistent and clear response to requestors for this information, the SBA has reviewed existing definitions for the term "mainframe computer" found in such publications as the Encyclopedia of Computer Science and Engineering and the McGraw-Hill Encyclopedia of Science and Technology. The SBA also contacted individuals at other Federal agencies such as the National Institute of Standards and Technology, the Department of Commerce, and the General Services Administration for advice and assistance on this matter. While some references on computer terminology use words relating to computer architecture, amount of computing power, numbers of potential users, means of cooling, cost, type of application, etc., there seems to be no uniform or clear definition available.

The SBA also found a lack of agreement on how and whether the term "mainframe computer" could or should be defined. There appears to be a general consensus that the development of a uniform definition for mainframe computer which would be widely accepted as a useful, working definition within the Federal procurement market and the computer industry is not possible. There also seems to be a growing consensus that, given rapid changes in technology with respect to computer architecture, capabilities, physical configuration, types and terminology used in marketing computer equipment, the term "mainframe computer" is fast becoming anachronistic, if not obsolete. It has also been the SBA's experience that in many cases, Federal agencies have specified requirements for computer hardware which can be met by minicomputer and superminicomputers as well as traditional mainframe computers. Further, given the competitive nature of the computer industry, the SBA has found that some computer manufacturers use different terminology (super-minicomputer, mainframe-class, mainframe-equivalent, etc.) to market the same product depending on the nature of the procurement.

Without a specific definition, the existing waiver for mainframe computers will continue to cause confusion and ultimately work to the detriment of small business manufacturers. Yet, for the reasons indicated above, a specific definition would not be possible (without the agency simply being arbitrary), nor

particularly useful, given the changing nature of the computer industry.

Therefore, the waiver of the Nonmanufacturer Rule for mainframe computers and certain associated peripheral equipment acquired on the same procurement is terminated, effective ninety days from the date of this notice. Small business set-aside or SBA 8(a) contracts for mainframe computers may rely on the waiver where the solicitation is dated before the ninetieth day after the date of **Federal Register** publication of this termination.

Dated: January 22, 1993.

Robert J. Moffitt,

Associate Administrator for Procurement Assistance.

[FR Doc. 93–3645 Filed 2–18–93; 8:45 am]

BILLING CODE 8025–01–M

13 CFR Part 121

Small Business Size Standards; Termination of Waiver of the Nonmanufacturer Rule

AGENCY: Small Business Administration.

ACTION: Notice of the Termination of a Waiver of the Nonmanufacturer Rule for xerographic printing paper.

SUMMARY: The Small Business Administration (SBA) is terminating the waiver of the Nonmanufacturer Rule for xerographic printing paper. The decision to terminate this waiver of the Nonmanufacturer Rule is based on evidence provided to the SBA that there is a small business which manufactures xerographic printing paper and is available to provide it to the Federal Government. Terminating the waiver will require recipients of contracts set aside for small or 8(a) businesses to provide the products of small business manufacturers or processors.

DATES: May 20, 1993.

FOR FURTHER INFORMATION CONTACT: James Parker, Procurement Analyst, phone (703) 695–2435.

SUPPLEMENTARY INFORMATION: Public Law 100–656, enacted on November 15, 1988, incorporated into the Small Business Act the previously existing regulation that recipients of Federal contracts set aside for small businesses or SBA 8(a) Program procurements must provide the products of small business manufacturers or processors. The SBA regulations imposing this requirement are found at 13 CFR 121.906(b) and 121.1106(b). Section 210 of Public Law 101–574 further amended the law to allow for waivers for classes of products for which there are no small business manufacturers or processors available to participate in the Federal procurement market.

SBA announced the waiver for xerographic printing paper in the **Federal Register** on April 22, 1992 (57 FR 14638). Xerographic printing paper is identified under Product and Service Code (PSC) 7530 and Standard Industrial Classification (SIC) Code 2621. Subsequently, through contacts with the General Services Administration (GSA) the SBA was made aware of contracts awarded to a small business that manufactures xerographic printing paper. Our knowledge of the existence of a small business manufacturer available to participate in the Federal procurement market requires us to terminate the waiver. Therefore, the waiver previously granted for xerographic paper under PSC 7530 and SIC 2621 is terminated, effective ninety days from the date of this notice. Small business set-aside or SBA 8(a) contracts for xerographic printing paper may rely on this waiver where the solicitation is dated before the ninetieth day after the date of **Federal Register** publication of this termination.

In addition, on July 24, 1992, SBA published a Notice of Intent to waive the Nonmanufacturer Rule for the class of products of printing paper (SIC Code 2621, PSC Code 7510). This class of products consists of, but is not restricted to index, mimeographic, duplicating and manifold paper. The same small business which manufactures xerographic paper also manufactures these products. The SBA will not, therefore, grant a waiver for printing paper.

Dated: January 29, 1993.

Robert J. Moffitt,

Associate Administrator for Procurement Assistance.

[FR Doc. 93–3646 Filed 2–18–93; 8:45 am]

BILLING CODE 8025–01–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 92–NM–183–AD; Amendment 39–8495; AD 93–02–12]

Airworthiness Directives; Beech Model 400A Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Beech Model 400A airplanes, that requires an inspection of certain circuit breaker wiring, and correction of any discrepancies found. This amendment is prompted by a recent report that, apparently during production, one of two bus wires on a Model 400A airplane was inadvertently connected to the incorrect side of a circuit breaker, leaving the circuit unprotected by its circuit breaker; this situation could result in the overheating of the wiring. The actions specified by this AD are intended to prevent the loss of standby power and the possibility of an electrical fire.

DATES: Effective March 26, 1993.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 26, 1993

ADDRESSES: The service information referenced in this AD may be obtained from Beech Aircraft Corporation, P.O. Box 85, Wichita, Kansas 67201–0085. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, room 100, Mid-Continent Airport, Wichita, Kansas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. C. Dale Bleakney, Aerospace Engineer, Systems and Equipment Branch, ACE–130W, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946–4135; fax (316) 946–4407.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations to include an airworthiness directive (AD) that is applicable to certain Beech Model 400A airplanes was published in the **Federal Register** on November 9, 1992 (57 FR 53299). That action proposed to require an inspection of certain circuit breaker wiring, and correction of any discrepancies found.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

There are approximately 15 Model 400A airplanes of the affected design in the worldwide fleet. The FAA estimates

that 15 airplanes of U.S. registry will be affected by this AD, that it will take approximately 2 work hours per airplane to accomplish the required actions, and that the average labor rate is $55 per work hour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $1,650, or $110 per airplane. This total cost figure assumes that no operator has yet accomplished the requirements of this AD.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

93–02–12. Beech Aircraft Corporation: Amendment 39–8495. Docket 92–NM–183–AD.

Applicability: Model 400A airplanes; serial numbers RK–2 through RK–29, inclusive, RK–31, and RK–32; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent the loss of standby power and the possibility of an electrical fire, accomplish the following:

(a) Within 100 hours time-in-service after the effective date of this AD, inspect the left-hand interstage turbine temperature (LH ITT) circuit breaker wiring, in accordance with Beechcraft Service Bulletin No. 2458 (ATA Code 39–10), dated August 1992. Prior to further flight, correct any discrepancies found, in accordance with the service bulletin.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Wichita Aircraft Certification Office (ACO), FAA, Small Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Wichita ACO.

Note: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Wichita ACO.

(c) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the requirements of this AD can be accomplished.

(d) The inspection shall be done in accordance with Beechcraft Service Bulletin No. 2458 (ATA Code 39–10), dated August 1992.

(Note: The issue date of Beechcraft Service Bulletin No. 2458 is indicated only on "page 1 of 5"; no other page is dated.) This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Beech Aircraft Corporation, P.O. Box 85, Wichita, Kansas 67201–0085. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, room 100, Mid-Continent Airport, Wichita, Kansas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on March 26, 1993.

Issued in Renton, Washington, on February 2, 1993.

James V. Devany,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 93–3851 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–P

14 CFR Part 39

[Docket No. 92–NM–188–AD; Amendment 39–8493; AD 93–02–10]

Airworthiness Directives; British Aerospace Model BH/DH/HS/BAe 125 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain British Aerospace Model BH/DH/HS/BAe 125 series airplanes, that currently requires repetitive inspections of certain battery supply cables to detect chafing and local damage, and replacement, if necessary. This amendment adds an optional modification of the wiring installation at Panel ZL, which, if accomplished, constitutes terminating action for the repetitive inspections. This amendment is prompted by the development of a modification that will reduce the possibility of battery wire chafing damage at Panel ZL. The actions specified by this AD are intended to prevent a circuit from overheating and resulting in a fire.

DATES: Effective March 26, 1993.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 26, 1993.

ADDRESSES: The service information referenced in this AD may be obtained from British Aerospace, PLC, Librarian for Service Bulletins, P.O. Box 17414, Dulles International Airport, Washington, DC 20041–0414. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. William Schroeder, Aerospace Engineer, Standardization Branch, ANM–113, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (206) 227–2148; fax (206) 227–1320.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations by superseding AD 87–12–08, Amendment 39–5652 (52 FR 23427, June 22, 1987), which is applicable to certain British Aerospace Model BH/DH/HS/BAe 125 series airplanes, was published in the Federal Register on November 12, 1992 (57 FR 53616). The action proposed to add an

optional modification of the wiring installation at Panel ZL, which, if accomplished, constitutes terminating action for the repetitive inspections.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the single comment received.

The commenter supports the proposed rule.

After careful review of the available data, including the comment noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

The FAA estimates that 416 airplanes of U.S. registry will be affected by this AD, that it will take approximately 1 work hour per airplane to accomplish the required actions, and that the average labor rate is $55 per work hour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $22,880, or $55 per airplane. This total cost figure assumes that no operator has yet accomplished the requirements of this AD.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39–5652 (52 FR 23427, June 22, 1987), and by adding a new airworthiness directive (AD), amendment 39–8493, to read as follows:

93–02–10. British Aerospace: Amendment 39–8493. Docket 92–NM–188–AD. Supersedes AD 87–12–08, Amendment 39–5652.

Applicability: Model BH/DH/HS/BAe 125 series airplanes; as listed in British Aerospace Alert Service Bulletin S.B. 24–A261, Revision 1, dated August 17, 1987; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

Note: Paragraphs (a) and (b) of this AD restate the requirements of AD 87–12–08, Amendment 39–5652, paragraphs (a) and (b). As allowed by the phrase, "unless accomplished previously," if the requirements of AD 87–12–08 have been accomplished previously, paragraph (a) of this AD does not require that the initial inspection be repeated.

To prevent a circuit from overheating and a resultant fire, accomplish the following:

(a) Within 10 days after July 7, 1987 (the effective date of AD 87–12–08, Amendment 39–5652): Inspect the battery cables to detect chafing and local damage, in accordance with British Aerospace Telex Alert Service Bulletin S.B. 24–A261, dated March 6, 1987; or British Aerospace Alert Service Bulletin S.B. 24–A261, dated March 9, 1987, or Revision 1, dated August 17, 1987. If chafing or damage is found, prior to further flight, replace the affected cable, in accordance with the applicable service bulletin.

(b) Repeat the inspection required by paragraph (a) of this AD at intervals not to exceed one year, and, if chafing or damage is found, replace the affected cable prior to further flight.

(c) Modification of the wiring installation at Panel ZL (Modification No. 253204A or B), in accordance with British Aerospace Service Bulletin SB.24–261–3204A&B, Revision 1, dated March 24, 1988, constitutes terminating action for the repetitive inspections required by paragraph (b) of this AD.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Standardization Branch, ANM–113, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Standardization Branch, ANM–113.

Note: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Standardization Branch, ANM–113.

(e) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the requirements of this AD can be accomplished.

(f) The modification shall be done in accordance with British Aerospace Service Bulletin SB.24–261–3204A&B, Revision 1, dated March 24, 1988. (**Note:** The issue date of this British Aerospace Service Bulletin SB.24–261–3204A&B is only indicated on "page 1 of 12"; no other page is dated.) This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from British Aerospace, PLC, Librarian for Service Bulletins, P.O. Box 17414, Dulles International Airport, Washington, DC 20041–0414. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on March 26, 1993.

Issued in Renton, Washington, on February 2, 1993.

James V. Devany,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 93–3849 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–P

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14 CFR Part 39

[Docket No. 92–NM–140–AD; Amendment 39–8494; AD 93–02–11]

Airworthiness Directives; British Aerospace Model HS 125–700A Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to all British Aerospace Model HS 125–700A series airplanes, that requires a one-time visual inspection of both upper wing skins for corrosion, and repair of corroded parts; and submission of an inspection report. This amendment is prompted by reports of corrosion on the left and right wing top skins under the boundary layer fence. The actions specified by this AD are intended to prevent reduced structural integrity of the wings.

DATES: Effective March 26, 1993.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 26, 1993.

ADDRESSES: The service information referenced in this AD may be obtained from British Aerospace, PLC, Librarian for Service Bulletins, P.O. Box 17414, Dulles International Airport, Washington, DC 20041–0414. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: William Schroeder, Aerospace Engineer, Standardization Branch, ANM–113, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (206) 227–2148; fax (206) 227–1320.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations to include an airworthiness directive (AD) that is applicable to all British Aerospace Model HS 125–700A series airplanes was published in the Federal Register on November 12, 1992 (57 FR 53615). That action proposed to require a one-time visual inspection of both upper wing skins for corrosion, and repair of corroded parts; and submission of an inspection report.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the single comment received.

The commenter supports the proposed rule.

After careful review of the available data, including the comment noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

The FAA estimates that 176 airplanes of U.S. registry will be affected by this AD, that it will take approximately 2 workhours per airplane to accomplish the required actions, and that the average labor rate is $55 per workhour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $19,360, or $110 per airplane. This total cost figure assumes that no operator has yet accomplished the requirements of this AD.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. app. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

§ 39.13 [AMENDED]

2. Section 39.13 is amended by adding the following new airworthiness directive:

93–02–11. British Aerospace: Amendment 39–8494. Docket 92–NM–140–AD.

Applicability: All Model HS 125–700A series airplanes, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent reduced structural integrity of the wings, accomplish the following:

(a) Within 6 months after the effective date of this AD, visually inspect left and right wing upper skins for corrosion beneath the boundary layer fence, in accordance with British Aerospace Service Bulletin S.B. 57–73, Revision 1, dated May 29, 1992.

(1) If any corroded parts are found in which the corrosion is within the limits described in British Aerospace Service Bulletin S.B. 57–73, Revision 1, dated May 29, 1992, prior to further flight, repair in accordance with that service bulletin.

(2) If any corroded parts are found in which the corrosion exceeds the limits described in British Aerospace Service Bulletin S.B. 57–73, Revision 1, dated May 29, 1992, prior to further flight, repair in accordance with a method approved by the Manager, Standardization Branch, ANM–113, FAA, Transport Airplane Directorate.

(b) Within 10 days after accomplishing the inspection required by paragraph (a) of this AD, submit a report of inspection findings to British Aerospace, in accordance with Appendix A of British Aerospace Service Bulletin S.B. 57–73, Revision 1, dated May 29, 1992. Report all findings, including nil defects, to: Service Support Manager, BAe 125, Corporate Jets Limited (H121), Customer Support Department, Comet Way, Hatfield, Hertfordshire, AL10 9TL, England; fax 0707 253959 or 252367; telex 21429 (BAA HPS-G). Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*) and have been assigned OMB Control Number 2120–0056.

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Standardization Branch, ANM–113, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Standardization Branch, ANM–113.

Note: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Standardization Branch, ANM–113.

(d) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the requirements of this AD can be accomplished.

(e) The inspection, repair, and report submission shall be done in accordance with British Aerospace Service Bulletin S.B. 57–73, Revision 1, dated May 29, 1992, which contains the following list of effective pages:

Page No.	Revision level shown on page	Date shown on page
1–2	1	May 29, 1992.
3–5, A1, A2, A3	Original	July 30, 1991.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from British Aerospace, PLC, Librarian for Service Bulletins, P.O. Box 17414, Dulles International Airport, Washington, DC 20041–0414. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on March 26, 1993.

Issued in Renton, Washington, on February 2, 1993.

James V. Devany,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 93–3869 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–P

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14 CFR Part 39

[Docket No. 92–NM–121–AD; Amendment 39–8492; AD 93–02–09]

Airworthiness Directives; SAAB–SCANIA Models SAAB SF340A and SAAB 340B Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain SAAB–SCANIA Models SAAB SF340A and SAAB 340B series airplanes, that requires relocation of the sensor loops of the bleed air leak detection system. This amendment is prompted by reports of bleed air leak detection systems failing to indicate leaks in the bleed air duct. The actions specified by this AD are intended to prevent damage/disbonding of the fuselage skin due to overheat, and subsequent reduced structural capability.

DATES: Effective March 26, 1993.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 26, 1993.

ADDRESSES: The service information referenced in this AD may be obtained from SAAB–SCANIA AB, SAAB Aircraft Product Support, S–581 88, Linköping, Sweden. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. Mark Quam, Aerospace Engineer, Standardization Branch, ANM–113, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (206) 227–2145; fax (206) 227–1320.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations to include an airworthiness directive (AD) that is applicable to certain SAAB–SCANIA Models SAAB SF340A and SAAB 340B series airplanes was published in the **Federal Register** on November 20, 1992 (57 FR 54731). That action proposed to require relocation of the sensor loops of the bleed air leak detection system.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the single comment received.

The commenter supports the proposed rule.

After careful review of the available data, including the comment noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

The FAA estimates that 180 airplanes of U.S. registry will be affected by this AD, that it will take approximately 4 work hours per airplane to accomplish the required actions, and that the average labor rate is $55 per work hour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $39,600, or $220 per airplane. This total cost figure assumes that no operator has yet accomplished the requirements of this AD.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "**ADDRESSES.**"

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

93–02–09. SAAB-SCANIA: Amendment 39–8492. Docket 92–NM–121–AD.

Applicability: Model SAAB SF340A series airplanes, serial numbers 004 through 159, inclusive; and Model SAAB 340B series airplanes, serial numbers 160 through 339, inclusive; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent damage/disbonding of the fuselage skin due to overheat, and subsequent reduced structural capability, accomplish the following:

(a) Within 3 months after the effective date of this AD, relocate the sensor loops of the bleed air leak detection system, in accordance with SAAB-SCANIA Service Bulletin SAAB 340–36–006, dated August 6, 1992.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Standardization Branch, ANM–113, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Standardization Branch, ANM–113.

Note: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Standardization Branch, ANM–113.

(c) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the requirements of this AD can be accomplished.

(d) The relocation shall be done in accordance with SAAB-SCANIA Service Bulletin SAAB 340–36–006, dated August 6, 1992. This incorporation by reference was approved by the Director of the **Federal Register** in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from SAAB-SCANIA AB, SAAB Aircraft Product Support, S–581 88, Linköping, Sweden. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the **Federal Register**, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on March 26, 1993.

Issued in Renton, Washington, on February 1, 1993.

James V. Devany,

Acting Manager, Transport Airplane Directorate Aircraft Certification Service.

[FR Doc. 93–3850 Filed 2–18–93; 8:45 am]

BILLING CODE 4910-13-P

Coast Guard

33 CFR Part 100

[CGD 05–93–07]

Special Local Regulations for Marine Events; 14th Annual Safety-at-Sea Seminar, Severn River, Annapolis, MD

AGENCY: Coast Guard, DOT.

ACTION: Notice of implementation of 33 CFR 100.511.

SUMMARY: This notice implements 33 CFR 100.511 for the 14th Annual Safety-at-Sea Seminar, an annual event to be held April 3, 1993, and April 4, 1993 on the Severn River, at Annapolis Maryland. These special local regulations are necessary to control vessel traffic within the immediate vicinity of the U.S. Naval Academy during the Pyrotechnic Display, Helicopter Rescue Demonstration, and Sail Training Craft Maneuver Demonstration. The effect will be to restrict general navigation in this area for the safety of the spectators and the participants in these events.

EFFECTIVE DATE: The regulations in 33 CFR 100.511 are effective for the following periods:

11 a.m. to 2:30 p.m., April 3, 1993.
11 a.m. to 2:30 p.m., April 4, 1993.

FOR FURTHER INFORMATION CONTACT: Mr. Stephen Phillips, Chief, Boating Affairs Branch, Boating Safety Division, Fifth Coast Guard District, 431 Crawford Street, Portsmouth, Virginia 23704–5004 (804) 398–6204, or Commander, Coast Guard Group Baltimore (410) 576–2516.

SUPPLEMENTARY INFORMATION:

Drafting Information

The drafters of this notice are QM1 Kevin R. Connors, project officer, Boating Affairs Branch, Boating Safety Division, Fifth Coast Guard District, and LT John B Gately, project attorney, Fifth Coast Guard District Legal Staff.

Discussion of Regulation

The U.S. Naval Academy, Annapolis, Maryland, submitted an application to hold the 14th Annual Safety-at-Sea Seminar on April 3, 1993 and April 4, 1993 in the Severn River just off the Robert Crown Sailing Center, U.S. Naval Academy, Annapolis, Maryland. The event includes demonstrations of life rafts, pyrotechnics, use of anti-exposure suits, man overboard procedures, and a helicopter rescue. Since this event is of the type contemplated by these regulations, the safety of the participants will be enhanced by the implementation of the special local regulations. Commercial traffic should not be severely disrupted.

Dated: February 8, 1993.

W.T. Leland,

Rear Admiral, U.S. Coast Guard Commander, Fifth Coast Guard District.

[FR Doc. 93–3907 Filed 2–18–93; 8:45 am]

BILLING CODE 4910-14-M

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33 CFR Part 100

[CGD 05–93–06]

Special Local Regulations for Marine Events; Crawford Bay Crew Classic, Southern Branch, Elizabeth River, Portsmouth, VA

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: Special Local Regulations are being adopted for the Crawford Bay Crew Classic, an annual event to be held on the Southern Branch of the Elizabeth River at Portsmouth, Virginia. These special local regulations are necessary to control vessel traffic in the immediate vicinity of this event. The effect will be to restrict general navigation in the regulated area for the safety of spectators and participants.

EFFECTIVE DATE: This regulation will be effective from 12 noon to 7 p.m. on the third Friday of March and from 6 a.m. to 6 p.m. on the third Saturday of March, unless otherwise specified in the Coast Guard Local Notice to Mariners and a **Federal Register** Notice.

FOR FURTHER INFORMATION CONTACT: Stephen L. Phillips, Chief, Boating Affairs Branch, Fifth Coast Guard District, 431 Crawford Street, Portsmouth, Virginia 23704–5004, (804) 398–6204.

SUPPLEMENTARY INFORMATION: The Coast Guard published a notice of proposed rulemaking concerning this regulation in the **Federal Register** on November 25, 1992 (57 FR 55492). Interested persons were requested to submit comments and none were received.

Drafting Information

The drafters of this notice are QM1 Kevin R. Connors, project officer, Boating Affairs Branch, Fifth Coast Guard District, and LT John B. Gately, project attorney, Fifth Coast Guard District Legal Staff.

Background and Purpose

The Crawford Bay Crew Classic, sponsored by Ports Events Inc., is an annual rowing regatta that attracts collegiate rowing teams nationwide. As part of the application, Ports Events Inc. requested that the Coast Guard provide control of spectator and commercial traffic within the regulated area.

Discussion of Regulations

This regulation will regulate the area surrounding the Crawford Bay Crew Classic on the Southern Branch of the Elizabeth River. Crew racing shells will be racing in heats starting in the vicinity of the Mobil Oil Docks and will finish in the vicinity of Portside, Portsmouth. This regulation is necessary to control spectator craft and to provide for the safety of life and property on navigable waters during the event. Marine traffic will be allowed to transit the regulated area between races. Since the main shipping channel will not be closed for extended periods of time, commercial traffic should not be severely disrupted.

Regulatory Evaluation

This regulation is not considered major under Executive Order 12291 and not significant under Department of Transportation regulatory policies and procedures (44 FR 11034; February 26, 1979). The economic impact of this proposal is expected to be so minimal that a full regulatory evaluation is unnecessary. This regulation will only be in effect for several hours each day of the event, and the impacts on routine navigation are expected to be minimal, since traffic will be allowed to pass between heats.

Small Entities

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*), the Coast Guard must consider whether this regulation will have a significant economic impact on a substantial number of small entities. "Small Entities" include independently owned and operated small businesses that are not dominant in their field and that otherwise qualify as "small business concerns" under section 3 of the Small Business Act (15 U.S.C. 632). Since the impact of this regulation on non-participating small entities is expected to be minimal, the Coast Guard will certify, under 5 U.S.C. 604(b), that this regulation will not have a significant economic impact on a substantial number of small entities.

Federalism Assessment

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that

this regulation does not raise sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Environmental Assessment

This regulation has been thoroughly reviewed by the Coast Guard and determined to be categorically excluded from further environmental documentation in accordance with section 2.B.2.c of Commandant Instruction M16475.1B. A Categorical Exclusion Determination statement has been prepared and been placed in the rulemaking docket, and is available for inspection or copying where indicated under **ADDRESSES.**

List of Subjects in 33 CFR Part 100

Marine safety, Navigation (water).

Proposed Regulations

In consideration of the foregoing, part 100 of title 33, Code of Federal Regulations is amended as follows:

PART 100—[AMENDED]

1. The authority citation for part 100 continues to read as follows:

Authority: 33 U.S.C. 1233; 49 CFR 1.46 and 33 CFR 100.35.

2. A new § 100.523 is added to read as follows:

§ 100.523 Southern Branch, Elizabeth River, Portsmouth, Virginia.

(a) *Definitions*—(1) *Regulated area.* The waters of the Southern Branch, Elizabeth River from shoreline to shoreline bounded to the south by a line drawn from latitude 36°49′11.0″ North, longitude 76°17′33.0″ West to latitude 36°49′11.0″ North, longitude 76°17′22.0″ West and bounded to the north by a line drawn from latitude 36°50′17.5″ North, longitude 76°17′45.0″ West to latitude 36°50′17.5″ North, longitude 76°17′30.0″ West

(2) *Coast Guard Patrol Commander.* The Coast Guard Patrol Commander is a commissioned, warrant, or petty officer of the Coast Guard who has been designated by the Commander, Coast Guard Group Hampton Roads.

(b) *Special Local Regulations.* (1) Except for participants in the Crawford Bay Crew Classic and vessels authorized by the Coast Guard Patrol Commander, no person or vessel may enter or remain in the regulated area without the permission of the Patrol Commander.

(2) The operator of any vessel in the immediate vicinity of this area shall:

(i) Stop the vessel immediately when directed to do so by any commissioned, warrant, or petty officer on board a vessel displaying a Coast Guard ensign.

(ii) Proceed as directed by any commissioned, warrant or petty officer on board a vessel displaying a Coast Guard ensign.

(3) The Coast Guard Patrol Commander may allow vessels to transit the regulated area whenever a race heat is not being run.

(4) Vessel operators are advised to remain clear of the advisory area during the effective periods of this regulation.

(c) *Effective periods.* This regulation will be effective from 12 noon to 7 p.m. on the third Friday of March and from 6 a.m. to 6 p.m. on the third Saturday of March, unless otherwise specified in the Coast Guard Local Notice to Mariners and a **Federal Register** notice.

Dated: February 8, 1993.

W. T. Leland,

Rear Admiral, U.S. Coast Guard Commander, Fifth Coast Guard District.

[FR Doc. 93–3906 Filed 2–18–93; 8:45 am]

BILLING CODE 4910-14-M

DEPARTMENT OF EDUCATION

34 CFR Part 682

RIN 1840–AA96

Federal Family Education Loan Programs

AGENCY: Department of Education.

ACTION: Final regulations.

SUMMARY: The Secretary amends regulations on Federal Family Education Loan Programs to add Office of Management and Budget (OMB) control numbers to certain sections of the regulations. Those sections contain information collection requirements approved by OMB. The Secretary takes this action to inform the public that these requirements have been approved.

EFFECTIVE DATE: These regulations are effective on February 19, 1993.

FOR FURTHER INFORMATION CONTACT: Patricia Beavan or Pamela Moran, Loans Branch, Division of Policy Development, Policy, Training, and Analysis Service, U.S. Department of Education, 400 Maryland Avenue, SW. (room 4310, ROB–3), Washington, DC 20202. Telephone Number (202) 708–8242. Deaf and hearing impaired individuals may call the Federal Dual Party Relay Service at 1–800–877–8339 in (Washington, DC 202 area code, telephone 708–9300) between 8 a.m. and 7 p.m. eastern time.

SUPPLEMENTARY INFORMATION: On December 18, 1992, final regulations for the Federal Family Education Loan Programs were published in the **Federal Register** at 57 FR 60280. The effective date of certain sections of these regulations was delayed until information collection requirements contained in those sections were approved by OMB under the Paperwork Reduction Act of 1980, as amended. OMB has approved the information collection requirements, and those sections of the regulations are now effective.

Waiver of Proposed Rulemaking

In accordance with section 431(b)(2)(A) of the General Education Provisions Act (20 U.S.C. 1232(b)(2)(A)) and the Administrative Procedure Act (5 U.S.C. 553), it is the practice of the Secretary to offer interested parties the opportunity to comment on proposed regulations. However, the publication of OMB control numbers is purely technical and does not establish substantive policy. Therefore, the Secretary has determined under 5 U.S.C. 553(b)(B), that proposed rulemaking is unnecessary and contrary to the public interest and that a delayed effective date is not required under 5 U.S.C. 553(d)(3).

List of Subjects in 34 CFR Part 682

Administrative practice and procedure, Colleges and universities, Education, Loan programs-education, Reporting and recordkeeping requirements, Student aid, Vocational education.

Dated: February 9, 1993.

Richard W. Riley,

Secretary of Education.

The Secretary amends part 682 of title 34 of the Code of Federal Regulations as follows:

PART 682—FEDERAL FAMILY EDUCATION LOAN PROGRAMS

1. The authority citation for part 682 continues to read as follows:

Authority: 20 U.S.C. 1071 to 1087–2, unless otherwise noted.

2. The OMB control number for §§ 682.205, 682.208, 682.411, 682.507, 682.511, 682.604, 682.606, and 682.610 continues to read as follows:

"(Approved by the Office of Management and Budget under control number 1840–0538)".

§§ 682.206, 682.209, 682.214, 682.305, 682.404, 682.406, 682.410, 682.605, 682.711, 682.712, 682.713, 682.802, Appendix B [Amended].

3. Sections 682.206, 682.209, 682.214, 682.305, 682.404, 682.406, 682.410, 682.605, 682.711, 682.712, 682.713, 682.802, and 682 Appendix B are amended by adding the OMB control number at the end of these sections to read as follows:

"(Approved by the Office of Management and Budget under control number 1840–0538)"

§§ 682.210, 682.211, 682.301, 682.401, 682.402, 682.407, 682.409, 682.412, 682.414, 682.508, 682.515, 682.601, 682.602, 682.603, 682.803 [Amended]

4. Sections 682.210, 682.211, 682.301, 682.401, 682.402, 682.407, 682.409, 682.412, 682.414, 682.508, 682.515, 682.601, 682.602, 682.603, and 682.803 are amended by revising the OMB control number following these sections to read as follows:

"(Approved by the Office of Management and Budget under control number 1840–0538)"

[FR Doc. 93–3843 Filed 2–18–93; 8:45 am]

BILLING CODE 4000–01–M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 271

[FRL–4558–1]

Georgia; Final Authorization of State's Hazardous Waste Management Program

AGENCY: Environmental Protection Agency.

ACTION: Immediate final rule; correction.

SUMMARY: This action corrects the list of authorities previously published in the **Federal Register** dated July 24, 1990, (55 FR 30000) for final authority. Approval of Georgia's program revision for requirements promulgated between July 1, 1985 and June 30, 1989 became effective on September 24, 1990; however, two rule corrections were inadvertently omitted from the July 24, 1990, **Federal Register** document.

DATES: Final authorization for Georgia shall be effective retroactively to September 24, 1990, unless EPA publishes a **Federal Register** action withdrawing this immediate final rule. All comments on this correction must be received by close of business by March 8, 1993.

ADDRESSES: Comments should be directed to Leonard W. Nowak at the address listed below.

FOR FURTHER INFORMATION CONTACT: Leonard W. Nowak, Acting Chief Waste Planning Section, Waste Management Division, U.S. Environmental Protection Agency, 345 Courtland Street, NE., Atlanta, Georgia 30365; (404) 347–2234.

SUPPLEMENTARY INFORMATION: These provisions were made publicly available for review during the public comment period in the original application and are still available at Georgia Environmental Protection Division and Environmental Protection Agency, Region IV listed in the address section of the July 24, 1990, **Federal Register** Notice. Public comments on the two omitted provisions will be received until the close of business March 8, 1993. If there are no adverse public comments, final authority for Georgia for these provisions will be effective retroactively to September 24, 1990.

In the immediate final rule published on July 24, 1990, at 55 FR 3000, insert the following entries in the table which begins on Page 330001.

Provision	FR reference	FR date	State authority
Listings of spent pickle liquor	51 FR 33612	9/22/86	391–3–11–.07
Standards for hazardous waste storage and treatment tank systems; correction	51 FR 29430	8/15/86	391–3–11–.10

Dated: January 12, 1993.

J. Barker,

Regional Administrator.

[FR Doc. 93–3790 Filed 2–18–93; 8:45 am]

BILLING CODE 6560–50–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

42 CFR Parts 435, 436, and 440

[MB–001–N]

RIN 0938–AA58

Medicaid Program; Eligibility and Coverage Requirements

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Notice of delay of effective dates and compliance dates.

SUMMARY: This notice delays by 6 months the effective dates and compliance dates of the final rule with comment period on Medicaid Eligibility and Coverage Requirements published January 19, 1993 in the **Federal Register** (58 FR 4908).

DATES: Effective February 18, 1993, the Effective and Compliance Dates are delayed as follows:

Effective Dates: These regulations are effective on August 18, 1993, except for §§ 435.604, 435.606, 436.604, and 436.606, which are effective October 19, 1993.

Compliance Dates: We will not hold a State out of compliance with the requirements of this final rule if the State submits preprinted plan amendments and required attachments by October 19, 1993, for all provisions other than §§ 435.604, 435.606, 436.604, and 436.606. States must comply with §§ 435.604, 435.606, 436.604, and 436.606, and submit preprinted plan amendments and required attachments for these sections, by the latest of: (1) January 19, 1994; (2) the first day of the next fiscal year in which appropriations apply following July 19, 1993 if State legislation is needed to appropriate funds to implement the provisions of these sections; or (3) the first day of the calendar quarter following the end of the next session of the State legislature that convenes after July 19, 1993 if the State needs authorizing legislation to implement the provisions of these sections.

FOR FURTHER INFORMATION CONTACT: Marinos Svolos, (410) 966–4451.

SUPPLEMENTARY INFORMATION: On January 19, 1993, we published in the **Federal Register** a final rule with comment period that amends the requirements for coverage of certain groups of individuals under Medicaid and the requirements for determining Medicaid eligibility. Because the new administration wants to fully review the policies in these regulations, we are delaying the effective dates and compliance dates for 6 months.

These regulations incorporate into the Medicaid regulations substantive changes made in the composition of eligibility groups of individuals and in the criteria used to determine their financial eligibility under Medicaid. The substantive changes were initially made by the Omnibus Budget Reconciliation Act of 1981 (OBRA '81), Public Law 97–35 and the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), Public Law 97–248 and further amended by the Deficit Reduction Act of 1984 (DRA), Public Law 98–369; the Consolidated Omnibus

Budget Reconciliation Act of 1985 (COBRA), Public Law 99–272; the Omnibus Budget Reconciliation Act of 1986 (OBRA '86), Public Law 99–509; the Medicare and Medicaid Patient and Program Protection Act of 1987, Public Law 100–93; the Omnibus Budget Reconciliation Act of 1987 (OBRA '87), Public Law 100–203; the Medicare Catastrophic Coverage Act of 1988 (MCCA), Public Law 100–360; the Family Support Act of 1988, Public Law 100–485; the Omnibus Budget Reconciliation Act of 1989 (OBRA '89), Public Law 101–239; and the Omnibus Budget Reconciliation Act of 1990 (OBRA '90), Public Law 101–508. In addition, the document contains changes made as a result of administrative decisions to improve program administration and efficiency.

(Catalog of Federal Domestic Assistance Program No. 93.778—Medical Assistance Program)

Dated: February 17, 1993.

William Toby,

Acting Deputy Administrator, Health Care Financing Administration.

Approved: February 17, 1993.

Donna E. Shalala,

Secretary.

[FR Doc. 93–4092 Filed 2–17–93; 5:10 pm]

BILLING CODE 4120–01–M

FEDERAL EMERGENCY MANAGEMENT AGENCY

44 CFR Part 64

[Docket No. FEMA–7564]

List of Communities Eligible for the Sale of Flood Insurance

AGENCY: Federal Insurance Administration, FEMA.

ACTION: Final rule.

SUMMARY: This rule identifies communities participating in the National Flood Insurance Program (NFIP). These communities have applied to the program and have agreed to enact certain floodplain management measures. The communities' participation in the program authorizes the sale of flood insurance to owners of property located in the communities listed.

EFFECTIVE DATE: The dates listed in the fourth column of the table.

ADDRESSES: Flood insurance policies for property located in the communities listed can be obtained from any licensed property insurance agent or broker serving the eligible community, or from the NFIP at: Post Office Box 457, Lanham, MD 20706, (800) 638–7418.

FOR FURTHER INFORMATION CONTACT: Frank H. Thomas, Assistant Administrator, Office of Loss Reduction, Federal Insurance Administration, 500 C Street, SW., room 417, Washington, DC 20472, (202) 646–2717.

SUPPLEMENTARY INFORMATION: The NFIP enables property owners to purchase flood insurance which is generally not otherwise available. In return, communities agree to adopt and administer local floodplain management aimed at protecting lives and new construction from future flooding. Since the communities on the attached list have recently entered the NFIP, subsidized flood insurance is now available for property in the community.

In addition, the Director of the Federal Emergency Management Agency has identified the special flood hazard areas in some of these communities by publishing a Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM). The date of the flood map, if one has been published, is indicated in the fifth column of the table. In the communities listed where a flood map has been published, section 102 of the Flood Disaster Protection Act of 1973, as amended, 42 U.S.C. 4012(a), requires the purchase of flood insurance as a condition of Federal or federally related financial assistance for acquisition or construction of buildings in the special flood hazard areas shown on the map.

The Director finds that the delayed effective dates would be contrary to the public interest. The Director also finds that notice and public procedure under 5 U.S.C. 553(b) are impracticable and unnecessary.

National Environmental Policy Act

This rule is categorically excluded from the requirements of 44 CFR part 10, Environmental Consideration. No environmental impact assessment has been prepared.

Regulatory Flexibility Act

The Federal Insurance Administrator certifies that this rule will not have a significant economic impact on a substantial number of small entities in accordance with the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, because the rule creates no additional burden, but lists those communities eligible for the sale of flood insurance.

Regulatory Impact Analysis

This rule is not a major rule under Executive Order 11291, Federal Regulation, February 17, 1981, 3 CFR, 1981 Comp., p. 127. No regulatory impact analysis has been prepared.

Paperwork Reduction Act

This rule does not involve any collection of information for purposes of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

Executive Order 12612, Federalism

This rule involves no policies that have federalism implications under Executive Order 12612, Federalism, October 26, 1987, 3 CFR, 1987 Comp., p. 252.

Executive Order 12778, Civil Justice Reform

This rule meets the applicable standards of section 2(b)(2) of Executive Order 12778, October 25, 1991, 56 FR 55195, 3 CFR, 1991 Comp., p. 309.

List of Subjects in 44 CFR Part 64

Flood insurance, Floodplains.

Accordingly, 44 CFR part 64 is amended as follows:

PART 64—[AMENDED]

1. The authority citation for part 64 continues to read as follows:

Authority: 42 U.S.C. 4001 *et seq.*, Reorganization Plan No. 3 of 1978, 3 CFR, 1978 Comp., p. 329; E.O. 12127, 44 FR 19367, 3 CFR, 1979 Comp., p. 376.

§ 64.6 [Amended]

2. The tables published under the authority of § 64.6 are amended as follows:

State and location	Community No.	Effective date of authorization/cancellation of sale of flood insurance in community	Current effective map date
New Eligibles—Emergency Program			
Texas: Ross, city of McLennan County	[illegible]1217	Jan. 6, 1993	May 30, 1978.
Massachusetts: Washington, town of Berkshire County	250044	....do	Oct. 8, 1976.

State and location	Community No.	Effective date of authorization/cancellation of sale of flood insurance in community	Current effective map date
New Eligibles—Regular Program			
Florida:			
Dade County, unincorporated areas	120635	Aug. 14, 1970, Emerg.; Sept. 29, 1972, Reg	Jan. 20, 1993.
Bal Harbour, city of Dade County	120636	do	Do.
Bay Harbor, town of Dade County	120637	do	Do.
Biscayne Park, village of Dade County	120638	do	Do.
Coral Gables, city of Dade County	120639	do	Do.
El Portal, village of Dade County	120640	do	Do.
Florida City, city of Dade County	120641	do	Do.
Golden Beach, town of Dade County	120642	do	Do.
Hialeah, city of Dade County	120643	do	Do.
Hialeah Gardens, city of Dade County	120644	do	Do.
Homestead, city of Dade County	120645	do	Do.
Indian Creek, village of Dade County	120646	do	Do.
Islandia, city of Dade County	120647	do	Do.
Key Biscayne, city of Dade County	120648	do	Do.
Medley, town of Dade County	120649	do	Do.
Miami, city of Dade County	120650	do	Do.
Miami Beach, city of Dade County	120651	do	Do.
Miami Shores, village of Dade County	120652	do	Do.
Miami Springs, city of Dade County	120653	do	Do.
North Bay Village, city of Dade County	120654	do	Do.
North Miami, city of Dade County	120655	do	Do.
North Miami Beach, city of Dade County	120656	do	Do.
Opa-Locka, city of Dade County	120657	do	Do.
South Miami, city of Dade County	120658	do	Do.
Surfside, town of Dade County	120659	do	Do.
Sweetwater, city of Dade County	120660	do	NSFHAs.[2]
Virginia Gardens, village of Dade County	120661	do	Jan. 20, 1993.
West Miami, city of Dade County	120662	do	NSFHAs.[2]
Reinstatements—Regular Program			
New York:			
Brownville, village of Jefferson County	361576	Nov. 21, 1975, Emerg.; Mar. 18, 1986, Reg.; Nov. 4, 1992, Susp.; Jan. 6, 1993, Rein.	Mar. 18, 1986.
Fairfield, town of Herkimer County	360302	Sept. 1, 1976, Emerg.; July 30, 1982, Reg.; Nov. 4, 1992, Susp.; Jan. 6, 1993, Rein.	Oct. 18, 1988.
Genoa, town of Cayuga County	360111	Feb. 1, 1977, Emerg.; Nov. 4, 1983, Reg.; Nov. 4, 1992, Susp.; Jan. 6, 1993; Rein.	Nov. 4, 1983.
Morrisville, village of Madison County	360406	Nov. 26, 1976, Emerg.; Apr. 15, 1982, Reg.; Nov. 4, 1992, Susp.; Jan. 6, 1993, Rein.	Apr. 15, 1982.
North Hudson, town of Essex County	361391	July 30, 1976, Emerg.; May 15, 1985, Reg.; Nov. 4, 1992, Susp.; Jan. 6, 1993, Rein.	May 15, 1985.
Wolcott, town of Allegany County	360901	June 8, 1976, Emerg.; July 23, 1982, Reg.; Nov. 4, 1992, Susp.; Jan. 19, 1993, Rein.	June 2, 1992.
Walcott, town of Allegany County	360291	Dec. 11, 1979, Emerg.; Nov. 4, 1983, Reg.; Nov. 4, 1992, Susp.; Jan. 28, 1993, Rein.	Nov. 4, 1983.
West Virginia: Marmet, city of Kanawha County	540079	June 12, 1975, Emerg.; Apr. 15, 1985, Reg.; Nov. 18, 1992, Susp.; Jan. 28, 1993, Rein.	Apr. 3, 1985.
Region II			
New Jersey: Stow Creek, township of Cumberland County	340174	Jan. 20, 1993, Suspension withdrawn	Jan. 20, 1993.
New York: Busti, town of Chautauqua County	361106	do	Do.
Region III			
West Virginia: Ranson, city of Jefferson County	540068	do	Do.
Florida:			
Bay Harbor Islands, town of Dade County	120637	do	Do.
Florida City, city of Dade County	120641	do	Do.
Hialeah Gardens, city of Dade County	120644	do	Do.
Homestead, city of Dade County	120645	do	Do.
Indian Creek, village of Dade County	120646	do	Do.
Islandia, city of Dade County	120647	do	Do.
Key Biscayne, city of Dade County	120648	do	Do.
Medley, town of Dade County	120649	do	Do.
North Bay Village, city of Dade County	120654	do	Do.
Opa-Locka, city of Dade County	120657	do	Do.
Surfside, town of Dade County	120659	do	Do.
Sweetwater, city of Dade County,	120660	do	NSFHAs.[2]
West Miami, city of Dade County	120662	do	NSFHAs.[2]

[1] Effective January 20, 1993, Metropolitan Dade County under CID No. *125098* is no longer a participating community in the NFIP.
Effective January 20, 1993, Dade County (for its unincorporated areas only) and the 27 municipalities formerly included under Metropolitan Dade County are now participating as separate communities with new CID numbers. All 28 communities have submitted applications and adopted compliant floodplain management measures that meet the specified requirements under 60.3 of the NFIP regulations. A countywide map for Dade County and 25 municipalities has been issued effective January 20, 1993. Two of the municipalities have no special flood hazard areas.

[2] No Special Flood Hazard Areas (NSFHAs).

Code for reading third column: Emerg.—Emergency; Reg.—Regular; Susp.—Suspension, Rein.—Reinstatement.

(Catalog of Federal Domestic Assistance No. 83.100, "Flood Insurance.")

Issued: February 11, 1993.

Francis V. Reilly,

Deputy Administrator, Federal Insurance Administration.

[FR Doc. 93–3904 Filed 2–18–93; 8:45 am]

BILLING CODE 6718–21–M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 0 and 13

[FO Docket No. 92–206; FCC 93–33]

Privatization of the Administration of Examinations for Commercial Operator Licenses and Clarification of Certain Rules

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This action amends title 47 of the Code of Federal Regulations to privatize commercial license examinations and establishes rules for implementing the new system. It also clarifies and updates the rules as proposed. This action is necessary to establish a private sector operator examination system that meets the need of applicants for more frequent examination opportunities at convenient locations, the need of industry for examinations that reflect state of the art technology and modern operating conditions, and the need of the Commission to reduce the resources it must expend on commercial operator licensing. The intended effect of this action is to promote excellence and efficiency in the licensing of commercial radio operators, to increase the availability and effectiveness of examinations, and to reduce government expenses.

EFFECTIVE DATE: March 29, 1993.

FOR FURTHER INFORMATION CONTACT: William T. Cross, Federal Communications Commission, Private Radio Bureau, Personal Radio Branch, Washington, DC 20554, (202) 632–4964.

SUPPLEMENTARY INFORMATION: 1. In 1986, we released a Notice of Inquiry seeking comment on whether privatizing commercial radio operator license examinations would serve the public interest. 51 FR 36415, September 24, 1986. As a result of that proceeding, we sought and received statutory authority to delegate preparation and administration of operator examinations to one or more private entities. Subsequently, we adopted a Notice proposing to amend the Commercial Radio Operator Rules, 47 CFR part 13, to privatize the six Commission-issued certificates, licenses, permits, or endorsements (licenses) that require an applicant to pass an examination. 57 FR 41718, September 11, 1992. In the Notice we noted the continuing demand for commercial operator licenses and the problems associated with the current testing system, including limited opportunities to take the tests and out-of-date examination questions. We also stated our belief that these problems will continue in the foreseeable future due to ongoing Commission resource constraints. To resolve these problems, we proposed turning the commercial operator examination function over to the private sector.

2. In response to the Notice, we received 22 comments and 11 reply comments. The comments uniformly support our proposal to privatize commercial radio operator examinations. They differ widely, however, in the details of how this should be accomplished. All of the commenters agree with our analysis of the problems and contend that the private sector can offer more up-to-date tests and more frequent examinations in many more diverse and accessible locations than the Commission. We agree. Accordingly, we are amending our rules to privatize commercial radio operator examinations.

3. The Commission's Report and Order, adopted January 14, 1993, and released February 12, 1993, is available for inspection and copying during normal business hours in the FCC Dockets Branch (room 239) 1919 M Street, NW., Washington, DC. The complete text of this decision, including the rule amendments, may also be purchased from the Commission's copy contractor, International Transcription Services, Inc., (202) 857–3800, 2100 M Street, NW., suite 140, Washington, DC 20037.

Summary of Report and Order

1. This action amends the rules for commercial radio operator examinations. The rule changes are set forth at the end of this document.

2. The following collection of information contained in the rules has been submitted to the Office of Management and Budget for review under section 3504(h) of the Paperwork Reduction Act of 1980. Copies of the submission may be purchased from the Commission's copy contractor, International Transcription Service, Inc. (address and telephone number are given above). Persons wishing to comment on this information collection should contact Jonas Neihardt, Office of Management and Budget, room 3235 NEOB, Washington, DC 20503, (202) 395–4814. A copy of comments made should also be sent to the Federal Communications Commission, Office of Managing Director, Washington, DC 20554. For further information contact Judy Boley, Federal Communications Commission, (202) 632–7513.

OMB Number: none.
Title: 13.217 Records—FO Docket No. 92–206.
Action: New collection.
Respondents: Businesses.
Estimated Annual Burden: 15 recordkeepers × 1 hour per response for a total of 15 burden hours.
Needs and Uses: Rule needed to assure that expenses and revenues collected by examination managers are necessary and prudent. We do not expect examination managers to collect this information until October 1, 1993.

3. Pursuant to the Regulatory Flexibility Act of 1980 (Pub. L. 96–354), 5 U.S.C. 604, our final analysis is as follows:

Need and purpose of this Action. This rule making proceeding was needed to obtain comments regarding our proposal to privatize examinations for licenses specified under part 13 of the Commission's Rules. The purpose of this action is to promote excellence and efficiency in the licensing of commercial radio operators by increasing the availability, relevance, and validity of commercial radio operator examinations and reducing government expenses.

Summary of issues raised by the public comments in response to the Initial Regulatory Flexibility Analysis. The commenters agree that the potential impact of these rule changes is to improve the efficiency in licensing commercial radio operators, thereby making it easier for small entities to hire licensed commercial radio operators. The commenters also recognize that the rule changes adopted in this proceeding may affect entities that voluntarily apply to become commercial radio operator license examination managers and entities that are engaged in training individuals to pass commercial radio operator examinations.

Significant alternatives considered and rejected. Alternatives include the Commission continuing to give examinations or contracting with another entity or entities to perform examination functions. The proposed alternative is adopted to minimize the impact on small entities.

4. This Report and Order and rule amendments are issued under the

authority of sections 4(f)(5), 4(i) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 154(f)(5), 154(i) and 303(r).

5. A copy of this Memorandum Opinion and Order will be forwarded to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects

47 CFR Part 0

Organization and functions (Government agencies).

47 CFR Part 13

Commercial radio operator examinations, Privatization of license examinations, Radio.

Federal Communications Commission.

Donna R. Searcy,

Secretary.

Rule Changes

Parts 0 and 13 of chapter I of title 47 of the Code of Federal Regulations are amended as follows:

PART 0—COMMISSION ORGANIZATION

1. The authority citation for part 0 continues to read as follows:

Authority: Sec. 5, 48 Stat. 1068, as amended; 47 U.S.C. 155.)

2. Section 0.131 is amended by adding new paragraphs (h) and (i) to read as follows:

§ 0.131 Functions of the Bureau.

* * * * *

(h) Establishes the number of examination managers necessary to manage commercial operator license examinations under part 13 of the rules; executes in the name of the Commission agreements pertaining to certification and employment of services of entities found qualified to prepare and administer commercial operator license examinations under part 13 of the rules; considers requests for review of certified manager's decisions; engages in oversight of manager actions and practices; and decertifies entities that do not perform satisfactorily.

(i) Revises the common question pool, the required Elements and topics, and the number of questions in each Element for commercial radio operator license examinations, as appropriate.

3. Section 0.485 is revised to read as follows:

§ 0.485 Commercial radio operator examinations.

Generally, written and telegraphy examinations for commercial radio operator licenses shall be conducted at locations and times specified by commercial operator license examination managers. (See § 13.209 of this Chapter). When the FCC conducts these examinations, they shall take place at locations and times specified by the FCC.

1. Part 13 is revised to read as follows:

PART 13—COMMERCIAL RADIO OPERATORS

General

13.1 Basis and purpose.
13.3 Definitions.
13.5 Licensed commercial radio operators required.
13.7 Classification of operator licenses and endorsements.
13.9 Eligibility and application for new license or endorsement.
13.11 Holding more than one commercial radio operator license.
13.13 Application for renewed or modified license.
13.15 License term.
13.17 Replacement license.
13.19 Operator's responsibility.

Examination System

13.201 Qualifying for a commercial operator license or endorsement.
13.203 Examination elements.
13.205 Examination credit for licenses held.
13.207 Preparing an examination.
13.209 Examination procedures.
13.211 Commercial radio operator license examination.
13.213 COLEM qualifications.
13.215 Question pools.
13.217 Records.

Authority: Secs. 4, 303, 48 Stat. 1066, 1082 as amended; 47 U.S.C. 154, 303.

§ 13.1 Basis and purpose.

(a) *Basis.* The basis for the rules contained in this part is the Communications Act of 1934, as amended, and applicable treaties and agreements to which the United States is a party.

(b) *Purpose.* The purpose of the rules in this part is to prescribe the manner and conditions under which commercial radio operators are licensed by the Commission.

§ 13.3 Definitions.

The definitions of terms used in part 13 are:

(a) *COLEM.* Commercial operator license examination manager.

(b) *Commercial radio operator.* A person holding a license or licenses specified in § 13.7(b).

(c) *GMDSS.* Global Maritime Distress and Safety System.

(d) *FCC.* Federal Communications Commission.

(e) *International Morse Code.* A dot-dash code as defined in International Telegraph and Telephone Consultative Committee (CCITT) Recommendation F.1 (1984), Division B, I. Morse code.

(f) *ITU.* International Telecommunication Union.

(g) *PPC.* Proof-of-Passing Certificate.

(h) *Question pool.* All current examination questions for a designated written examination element.

(i) *Question set.* A series of examination questions on a given examination selected from the current question pool.

(j) *Radio Regulations.* The latest ITU *Radio Regulations* to which the United States is a party.

§ 13.5 Licensed commercial radio operator required.

Rules that require FCC station licensees to have certain transmitter operating, maintenance, and repair duties performed by a commercial radio operator are contained in parts 23, 73, 74, 80, and 87 of this Chapter.

§ 13.7 Classification of operator licenses and endorsements.

(a) Commercial radio operator licenses issued by the FCC are classified in accordance with the Radio Regulations of the ITU.

(b) There are nine types of commercial radio operator licenses, certificates and permits (licenses). The license's ITU classification, if different from its name, is given in parenthesis.

(1) First Class Radiotelegraph Operator's Certificate.

(2) Second Class Radiotelegraph Operator's Certificate.

(3) Third Class Radiotelegraph Operator's Certificate (radiotelegraph operator's special certificate).

(4) General Radiotelephone Operator License (radiotelephone operator's general certificate).

(5) Marine Radio Operator Permit (radiotelephone operator's restricted certificate).

(6) Restricted Radiotelephone Operator Permit (radiotelephone operator's restricted certificate).

(7) Restricted Radiotelephone Operator Permit-Limited Use (radiotelephone operator's restricted certificate).

(8) GMDSS Radio Operator's License (general operator's certificate).

(9) GMDSS Radio Maintainer's License (technical portion of the first-class radio electronic certificate).

(c) There are six license endorsements affixed by the FCC to provide special authorizations or restrictions. Endorsements may be affixed to the license(s) indicated in parenthesis.

(1) Ship Radar Endorsement (First and Second Class Radiotelegraph Operator's Certificates, General Radiotelephone Operator License, GMDSS Radio Maintainer's License).

(3) Restrictive endorsements relating to physical handicaps, English language or literacy waivers, or other matters (all licenses).

(4) Marine Radio Operator Permits shall bear the following endorsement: This permit does not authorize the operation of AM, FM or TV broadcast stations.

(5) General Radiotelephone Operator Licenses issued after December 31, 1985, shall bear the following endorsement: This license confers authority to operate licensed radio stations in the Aviation, Marine and International Fixed Public Radio Services only. This authority is subject to: any endorsement placed upon this license; FCC orders, rules, and regulations; United States statutes; and the provisions of any treaties to which the United States is a party. This license does not confer any authority to operate broadcast stations. It is not assignable or transferable.

(6)(i) If a person is afflicted with an uncorrected physical handicap which would clearly prevent the performance of all or any part of the duties of a radio operator, under the license for which application is made, at a station under emergency conditions involving the safety of life or property, that person still may be issued the license if found qualified. Such a license shall bear a restrictive endorsement as follows:

This license is not valid for the performance of any operating duties, other than installation, service and maintenance duties, at any station licensed by the FCC which is required, directly or indirectly, by any treaty, statute or rule or regulation pursuant to statute, to be provided for safety purposes.

(ii) In the case of a license that does not require an examination in technical radio matters, the endorsement specified in paragraph (c)(6)(i) of this section will be modified by deleting the reference therein to installation, service, and maintenance duties.

(iii) In any case where an applicant who normally would receive or has received a commercial radio operator license bearing the endorsement prescribed by paragraph (c)(6)(i) of this section, indicates a desire to operate a station falling within the prohibited terms of the endorsement, the applicant may request in writing that such endorsement not be placed upon, or be removed from his or her license, and may submit written comments or statements from other parties in support thereof.

(iv) An applicant who shows that he has performed satisfactorily the duties of a radio operator at a station required to be provided for safety purposes during a period when he or she was afflicted by uncorrected physical handicaps of the same kind and to the same degree as the physical handicaps shown by his or her current application shall not be deemed to be within the provisions of paragraph (c)(6)(i) of this section.

(d) A Restricted Radiotelephone Operator Permit-Limited Use issued by the FCC to an aircraft pilot who is not legally eligible for employment in the United States is valid only for operating radio stations on aircraft.

(e) A Restricted Radiotelephone Operator Permit-Limited Use issued by the FCC to a person under the provision of Section 303(1)(2) of the Communications Act of 1934, as amended, is valid only for the operation of radio stations for which that person is the station licensee.

§ 13.9 Eligibility and application for new license or endorsement.

(a) If found qualified, the following persons are eligible to apply for commercial radio operator licenses:

(1) Any person legally eligible for employment in the United States.

(2) Any person, for the purpose of operating aircraft radio stations, who holds:

(i) United States pilot certificates; or

(ii) Foreign aircraft pilot certificates which are valid in the United States, if the foreign government involved has entered into a reciprocal agreement under which such foreign government does not impose any similar requirement relating to eligibility for employment upon United States citizens.

(3) Any person who holds a FCC radio station license, for the purpose of operating that station.

(4) Notwithstanding any other provisions of the FCC's rules, no person shall be eligible to be issued a commercial radio operator license when

(i) The person's commercial radio operator license is suspended, or

(ii) The person's commercial radio operator license is the subject of an ongoing suspension proceeding, or

(iii) The person is afflicted with complete deafness or complete muteness or complete inability for any other reason to transmit correctly and to receive correctly by telephone spoken messages in English.

(b)(1) Each application for a new General Radiotelephone Operator License, Marine Radio Operator Permit, First Class Radiotelegraph Operator's Certificate, Second Class Radiotelegraph Operator's Certificate, Third Class Radiotelegraph Operator's Certificate, Ship Radar Endorsement, Six Months Service Endorsement, GMDSS Radio Operator's License or GMDSS Radio Maintainer's License must be made on FCC Form 756.

(2) Each application for a Restricted Radiotelephone Operator Permit must be made on FCC Form 753.

(3) Each application for a Restricted Radiotelephone Operator Permit-Limited Use must be made on FCC Form 755.

(c) Each application for a new General Radiotelephone Operator License, Marine Radio Operator Permit, First Class Radiotelegraph Operator's Certificate, Second Class Radiotelegraph Operator's Certificate, Third Class Radiotelegraph Operator's Certificate, Ship Radar Endorsement, GMDSS Radio Operator's License or GMDSS Radio Maintainer's License must include an original PPC(s) from a COLEM(s) showing that the applicant has passed the necessary examination element(s). The applicant must submit the application to the address specified in the part 1 of the rules.

(d) Each application for a new six month radiotelegraph endorsement must include documentation showing the applicant has satisfied the requirements of § 13.201(c). The applicant must submit the application to the address specified in part 1 of the rules.

(e) No person shall alter, duplicate for fraudulent purposes, or fraudulently obtain or attempt to obtain an operator license. No person shall use a license issued to another or a license that he or she knows to be altered, duplicated for fraudulent purposes, or fraudulently obtained. No person shall obtain or attempt to obtain, or assist another person to obtain or attempt to obtain, an operator license by fraudulent means.

§ 13.11 Holding more than one commercial radio operator license.

(a) An eligible person may hold more than one commercial operator license except as follows:

(1) No person may hold two or more unexpired radiotelegraph operator's certificates at the same time;

(2) No person may hold any class of radiotelegraph operator's certificate and a Marine Radio Operator Permit;

(3) No person may hold any class of radiotelegraph operator's certificate and a Restricted Radiotelephone Operator Permit.

(b) Each person who is not legally eligible for employment in the United States, and certain other persons who were issued permits prior to September 13, 1982, may hold two Restricted Radiotelephone Operator Permits

simultaneously when each permit authorizes the operation of a particular station or class of stations.

§ 13.13 Application for a renewed or modified license.

(a) Each application to renew a First Class Radiotelegraph Operator's Certificate, Second Class Radiotelegraph Operator's Certificate, Third Class Radiotelegraph Operator's Certificate, Marine Radio Operator Permit, GMDSS Radio Operator's License, or GMDSS Radio Maintainer's License must be made on FCC Form 756. The application must be accompanied by the original document or a legible photocopy unless it has been lost, mutilated, or destroyed. If the license has been lost, mutilated, or destroyed, submit a written explanation. The application must be accompanied by the appropriate fee and submitted to the address specified in part 1 of the rules.

(b) A licensee may submit an application for renewal of an unexpired license during the last year of the license term. If a license expires, application for renewal may be made during a grace period of five years after the expiration date without having to retake the required examinations. The application must be accompanied by the required fee and submitted to the address specified in part 1 of the rules. During the grace period, the expired license is not valid. A license renewed during the grace period will be effective as of the date of the renewal. Licensees who fail to renew their license within the grace period must apply for a new license and take the required examination(s).

(c) Each application involving a change in operator class must be made on FCC Form 756. Each application for a commercial operator license involving a change in operator class must include original PPC(s) from a COLEM showing that the applicant has passed the necessary examination element(s). The application must be accompanied by the required fee, if any, and submitted to the address specified in part 1 of the rules.

(d) The holder of a First Class Radiotelegraph Operator's Certificate, Second Class Radiotelegraph Operator's Certificate, Third Class Radiotelegraph Operator's Certificate, General Radiotelephone Operator License, Marine Radio Operator Permit, GMDSS Radio Operator's License, or GMDSS Radio Maintainer's License whose name is legally changed may obtain a modified license by filing a FCC Form 756 with a written explanation. The application must be accompanied by the required fee and submitted to the address specified in part 1 of the rules.

(e) A licensee who has made application for a renewed or modified operator license or permit may exhibit a photocopy of their license in lieu of the original document.

§ 13.15 License term.

(a) Commercial radio operator licenses are normally valid for a term of five years from the date of issuance, except as provided in paragraph (b) of this section.

(b) General Radiotelephone Operator Licenses, Restricted Radiotelephone Operator Permits, and Restricted Radiotelephone Operator Permits-Limited Use are normally valid for the lifetime of the holder. The terms of all Restricted Radiotelephone Operator Permits issued prior to November 15, 1953, and valid on that date, are extended to the lifetime of the operator.

§ 13.17 Replacement license.

(a) Each licensee or permittee whose original document is lost, mutilated, or destroyed must request a replacement. The application must be accompanied by the required fee and submitted to the address specified in part 1 of the rules.

(b) Each application for a replacement General Radiotelephone Operator License, Marine Radio Operator Permit, First Class Radiotelegraph Operator's Certificate, Second Class Radiotelegraph Operator's Certificate, Third Class Radiotelegraph Operator's Certificate, GMDSS Radio Operator's License, GMDSS Radio Maintainer's License, must be made on FCC Form 756 and must include a written explanation as to the circumstances involved in the loss, mutilation, or destruction of the original document.

(c) Each application for a replacement Restricted Radiotelephone Operator Permit must be on FCC Form 753.

(d) Each application for a replacement Restricted Radiotelephone Operator Permit-Limited Use must be on FCC Form 755.

(e) A licensee who has made application for a replacement license may exhibit a copy of the application submitted to the FCC or a photocopy of the license in lieu of the original document.

§ 13.19 Operator's responsibility.

(a) The operator responsible for maintenance of a transmitter may permit other persons to adjust that transmitter in the operator's presence for the purpose of carrying out tests or making adjustments requiring specialized knowledge or skill, provided that he or she shall not be relieved thereby from responsibility for the proper operation of the equipment.

(b) In every case where a station operating log or service and maintenance log is required, the operator responsible for the station operation or maintenance shall make the required entries in the station log. If no station log is required, the operator responsible for service or maintenance duties which may affect the proper operation of the station shall sign and date an entry in the station maintenance records giving:

(1) Pertinent details of all service and maintenance work performed by the operator or conducted under his or her supervision;

(2) His or her name and address; and

(3) The class, serial number and expiration date of the license:

(c) When the operator is on duty and in charge of transmitting systems, or performing service, maintenance or inspection functions, the license or permit document, or a photocopy thereof, must be posted or in the operator's personal possession, and available for inspection upon request by a FCC representative.

(d) The operator on duty and in charge of transmitting systems, or performing service, maintenance or inspection functions, shall not be subject to the requirements of paragraph (b) of this section at a station, or stations of one licensee at a single location, at which the operator is regularly employed and at which his or her license, or a photocopy, is posted.

Examination System

§ 13.201 Qualifying for a commercial operator license or endorsement.

(a) To be qualified to hold any commercial radio operator license, an applicant must have a satisfactory knowledge of FCC rules and must have the ability to send correctly and receive correctly spoken messages in the English language.

(b) An applicant must pass an examination for the issuance of a new commercial radio operator license, other than the Restricted Radiotelephone Operator Permit and the Restricted Radiotelephone Operator Permit-Limited Use, and for each change in operator class. An applicant must pass an examination for the issuance of a new Ship Radar Endorsement. Each application for the class of license or endorsement specified below must pass, or otherwise receive credit for, the corresponding examination elements:

(1) First Class Radiotelegraph Operator's Certificate.

(i) Telegraphy Elements 3 and 4;

(ii) Written Elements 1, 5, and 6;

(iii) Applicant must be at least 21 years old;

(iv) Applicant must have one year of experience in sending and receiving public correspondence by radiotelegraph at a public coast station, a ship station, or both.

(2) Second Class Radiotelegraph Operator's Certificate.

(i) Telegraphy Elements 1 and 2;

(ii) Written Elements 1, 5, and 6.

(3) Third Class Radiotelegraph Operator's Certificate.

(i) Telegraphy Elements 1 and 2;

(ii) Written Elements 1 and 5.

(4) General Radiotelephone Operator License: Written Elements 1 and 3.

(5) Marine Radio Operator Permit: Written Element 1.

(6) GMDSS Radio Operator's License: Written Elements 1 and 7.

(7) GMDSS Radio Maintainer's License: Written Elements 1, 3, and 9.

(8) Ship Radar Endorsement: Written Element 8.

(c) An applicant for the six months service endorsement must show that:

(1) The applicant was employed as a radio operator on board a ship or ships of the United States for a period totaling at least six months;

(2) The ships were equipped with a radio station complying with the provisions of part II of title III of the Communications Act, or the ships were owned and operated by the U.S. Government and equipped with radio stations;

(3) The ships were in service during the applicable six month period and no portion of any single in-port period included in the qualifying six months period exceeded seven days;

(4) The applicant held a FCC-issued First or Second Class Radiotelegraph Operator's Certificate during this entire six month qualifying period; and

(5) The applicant holds a radio officer's license issued by the U.S. Coast Guard at the time the six month endorsement is requested.

§ 13.203 Examination elements.

(a) A written examination (written Element) must prove that the examinee possesses the operational and technical qualifications to perform the duties required by a person holding that class of commercial radio operator license. Each written examination must be comprised of a question set as follows:

(1) Element 1 (formerly Elements 1 and 2): Basic radio law and operating practice with which every maritime radio operator should be familiar. 24 questions concerning provisions of laws, treaties, regulations, and operating procedures and practices generally followed or required in communicating by means of radiotelephone stations. The minimum passing score is 18 questions answered correctly.

(2) Element 3: General radiotelephone. 76 questions concerning electronic fundamentals and techniques required to adjust, repair, and maintain radio transmitters and receivers at stations licensed by the FCC in the aviation, maritime, and international fixed public radio services. The minimum passing score is 57 questions answered correctly.

(3) Element 5: Radiotelegraph operating practice. 50 questions concerning radio operating procedures and practices generally followed or required in communicating by means of radiotelegraph stations primarily other than in the maritime mobile services of public correspondence. The minimum passing score is 38 questions answered correctly.

(4) Element 6: Advanced radiotelegraph. 100 questions concerning technical, legal and other matters applicable to the operation of all classes of radiotelegraph stations, including operating procedures and practices in the maritime mobile services of public correspondence, and associated matters such as radio navigational aids, message traffic routing and accounting, etc. The minimum passing score is 75 questions answered correctly.

(5) Element 7: GMDSS radio operating practices. 76 questions concerning GMDSS radio operating procedures and practices sufficient to show detailed practical knowledge of the operation of all GMDSS sub-systems and equipment; ability to send and receive correctly by radio telephone and narrow-band direct-printing telegraphy; detailed knowledge of the regulations applying to radio communications, knowledge of the documents relating to charges for radio communications and knowledge of those provisions of the International Convention for the Safety of Life at Sea which relate to radio; sufficient knowledge of English to be able to express oneself satisfactorily both orally and in writing; knowledge of and ability to perform each function listed in § 80.1081; and knowledge covering the requirements set forth in IMO Assembly Resolution on Training for Radio Personnel (GMDSS), Annex 3. The minimum passing score is 57 questions answered correctly.

(6) Element 8: Ship radar techniques. 50 questions concerning specialized theory and practice applicable to the proper installation, servicing and maintenance of ship radar equipment in general use for marine navigational purposes. The minimum passing score is 38 questions answered correctly.

(7) Element 9: GMDSS radio maintenance practices and procedures. 50 questions concerning the requirements set forth in IMO Assembly on Training for Radio Personnel (GMDSS), Annex 5 and IMO Assembly on Radio Maintenance Guidelines for the Global Maritime Distress and Safety System related to Sea Areas A3 and A4. The minimum passing score is 38 questions answered correctly.

(b) A telegraphy examination (telegraphy Elements) must prove that the examinee has the ability to send correctly by hand and to receive correctly by ear texts in the international Morse code at not less than the prescribed speed, using all the letters of the alphabet, numerals 0–9, period, comma, question mark, slant mark, and prosigns *AR*, *BT*, and *SK*.

(1) Telegraphy Element 1: 16 code groups per minute.

(2) Telegraphy Element 2: 20 words per minute.

(3) Telegraphy Element 3: 20 code groups per minute.

(4) Telegraphy Element 4: 25 words per minute.

§ 13.205 Examination credit for licenses held.

(a) The COLEM must give credit as specified below to an examine holding any of the following documents:

(1) An unexpired (or within the grace period) FCC-issued commercial radio operator license: the written examination and telegraphy Element(s) required to obtain the license held.

(2) A PPC: Each element the PPC indicates the examinee passed within the previous 365 days.

(3) An unexpired or within the grace period FCC-issued Amateur Extra Class operator license: Telegraphy Elements 1 and 2.

(b) No examination credit, except as herein provided, shall be allowed on the basis of holding or having held any other license, permit, or certificate.

§ 13.207 Preparing an examination.

(a) Each telegraphy message and each written question set administered to an examinee for a commercial radio operator license must be provided by a COLEM.

(b) Each question set administered to an examinee must utilize questions taken from the applicable Element question pool. The COLEM may obtain the written question sets from a supplier or other COLEM.

(c) A telegraphy examination must consist of a plain language text or code group message sent in the international

Morse code at no less than the prescribed speed for a minimum of five minutes. The message must contain each required telegraphy character at least once. No message known to the examinee may be administered in a telegraphy examination. Each five letters of the alphabet must be counted as one word or one code group. Each numeral, punctuation mark, and prosign must be counted as two letters of the alphabet. The COLEM may obtain the telegraphy message from a supplier or other COLEM.

§ 13.209 Examination procedures.

(a) Each examination for a commercial radio operator license must be administered at a location and a time specified by the COLEM. The COLEM is responsible for the proper conduct and necessary supervision of each examination. The COLEM must immediately terminate the examination upon failure of the examinee to comply with its instructions.

(b) Each examinee, when taking an examination for a commercial radio operator license, shall comply with the instructions of the COLEM.

(c) No examination that has been compromised shall be administered to any examinee. Neither the same telegraphy message nor the same question set may be re-administered to the same examinee.

(d) Passing a telegraphy examination.

(1) To pass a receiving telegraphy examination, an examinee is required to receive correctly the message by ear, for a period of 1 minute without error at the rate of speed specified in § 13.203 for the class of license sought.

(2) To pass a sending telegraphy examination, an examinee is required to send correctly for a period of 1 minute at the rate of speed prescribed in § 13.203(b) for the class of license sought.

(e) Passing a telegraphy receiving examination is adequate proof of an examinee's ability to both send and receive telegraphy. The COLEM, however, may also include a sending segment in a telegraphy examination.

(f) The COLEM is responsible for determining the correctness of he examinee's answers. When the examinee does not score a passing grade on an examination element, the COLEM must inform the examinee of the grade.

(g) When the examinee is credited for all examination elements required for the commercial operator license sought, the examinee may apply to the FCC for the license.

(h) No applicant who is eligible to apply for any commercial radio operator license shall, by reason of any physical handicap, be denied the privilege of applying and being permitted to attempt to prove his or her qualifications (by examination if examination is required) for such commercial radio operator license in accordance with procedures established by the COLEM.

(i) The COLEM must accommodate an examinee whose physical disabilities require a special examination procedure. The COLEM may require a physician's certification indicating the nature of the disability before determining which, if any, special procedures are appropriate to use. In the case of a blind examinee, the examination questions may be read aloud and the examinee may answer orally. A blind examinee wishing to use this procedure must make arrangements with the COLEM prior to the date the examination is desired.

(j) The FCC may:

(1) Administer any examination element itself.

(2) Readminister any examination element previously administered by a COLEM, either itself or by designating another COLEM to readminister the examination element.

(3) Cancel the commercial operator license(s) of any licensee who fails to appear for re-administration of an examination when directed by the FCC, or who fails any required element that is re-administered. In case of such cancellation, the person will be issued an operator license consistent with completed examination elements that have not been invalidated by not appearing for, or by failing, the examination upon re-administration.

§ 13.211 Commercial radio operator license examination.

(a) Each session where an examination for a commercial radio operator license is administered must be managed by a COLEM or the FCC.

(b) Each examination for a commercial radio operator license must be administered as determined by the COLEM.

(c) The COLEM may limit the number of candidates at any examination.

(d) The COLEM may prohibit from the examination area items the COLEM determines could compromise the integrity of an examination or distract examinees.

(e) Within 10 days of completion of the examination element(s), the COLEM must provide the results of the examination to the examinee and the COLEM must issue a PPC to an examinee who scores a passing grade on an examination element.

(f) A PPC is valid for 365 days from the date it is issued.

§ 13.213 COLEM qualifications.

No entity may serve as a COLEM unless it has entered into a written agreement with the FCC. In order to be eligible to be a COLEM, the entity must:

(a) Agree to abide by the terms of the agreement;

(b) Be capable of serving as a COLEM;

(c) Agree to coordinate examinations for one or more types of commercial radio operator licenses and/or endorsements;

(d) Agree to assure that, for any examination, every examinee eligible under these rules is registered without regard to race, sex, religion, national origin or membership (or lack thereof) in any organization;

(e) Agree to make any examination records available to the FCC, upon request.

(f) Agree not to administer an examination to an employee, relative, or relative of an employee.

§ 13.215 Question pools.

The question pool for each written examination element will be composed of questions acceptable to the FCC. Each question pool must contain at least 5 times the number of questions required for a single examination. The FCC will issue public announcements detailing the questions in the pool for each element. COLEMs must use only the most recent question pool made available to the public when preparing a question set for a written examination element.

§ 13.217 Records.

Each COLEM recovering fees from examinees must maintain records of expenses and revenues, frequency of examinations administered, and examination pass rates. Records must cover the period from January 1 to December 31 of the preceding year and must be submitted as directed by the Commission. Each COLEM must retain records for 1 year and the records must be made available to the FCC upon request.

[FR Doc. 93–3895 Filed 2–18–93; 8:45 am]

BILLING CODE 6712–01–M

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47 CFR Part 1

[FCC 93–56]

Telecommunications Authorization Act of 1992

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: By this action, the Commission amends the Schedule of

Charges to establish a separate section governing fees for the processing of applications related to Low-Earth Orbit Satellite Systems and to modify the fee for the inspection of vessels under the Great Lakes Agreement. These amendments are necessary to bring the Commission's rules into statutory compliance with the Telecommunications Authorization Act of 1992.

EFFECTIVE DATE: February 19, 1993.

FOR FURTHER INFORMATION CONTACT: Thomas Holleran, Office of Managing Director, Federal Communications Commission, (202) 632–5316.

Accordingly, it is ordered, that the Schedule of Charges, 47 CFR 1.1102 *et seq.*, is amended as set forth below.

List of Subjects in 47 CFR Part 1

Administrative practice and procedure.

Federal Communications Commission.

Donna R. Searcy,

Secretary.

Rule Changes

Part 1 of title 47 of the U.S. Code of Federal Regulations is amended to read as follows:

PART 1—PRACTICE AND PROCEDURE

1. The authority citation for part 1 continues to read as follows:

Authority: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303; Implement, 5 U.S.C. 552, unless otherwise noted.

2. Section 1.1103 is amended by revising number 16a to read as follows:

§ 1.1103 Schedule of Charges for equipment authorization, experimental radio services, international telecommunications settlements, radio operator examinations, and ship inspections.

* * * * *

Action	FCC form No.	Fee amount	Fee type code	Address
16. Great Lakes Agreement:				
a. Inspection	FCC 801, FCC 155 ..	75.00	FDS	Federal Communications Commission, P.O. Box 358110, Pittsburgh, PA 15251–5110.

* * * * *

3. Section 1.1105 is amended by adding number 22 to read as follows:

§ 1.1105 Schedule of Charges for common carrier services.

* * * * *

Action	FCC form No.	Fee amount	Fee type code	Address
22. Low-Earth Orbit Satellite Systems:				
a. Application for Authority to Construct (per system of technologically identical satellites).	Written Request & FCC 155.	6,000.00	CZW	Federal Communications Commission, Common Carrier Dom. Earth Stations, P.O. Box 358160, Pittsburgh, PA 15251–5160.
b. Application for Authority to Launch and Operate (per system of technologically identical satellites).	Written Request & FCC 155.	210,000.00	CLW	Federal Communications Commission, Common Carrier Dom. Earth Stations, P.O. Box 358160, Pittsburgh, PA 15251–5160.
c. Assignment or Transfer (per request)	Written Request & FCC 155.	6,000.00	CZW	Federal Communications Commission, Common Carrier Dom. Earth Stations, P.O. Box 358160, Pittsburgh, PA 15251–5160.
d. Modification (per request	Written Request & FCC 155.	15,000.00	CZW	Federal Communications Commission, Common Carrier Dom. Earth Stations, P.O. Box 358160, Pittsburgh, PA 15251–5160.
e. Special Temporary Authority or Waiver of Prior Construction Authorization (per request).	Written Request & FCC 155.	1,500.00	CXW	Federal Communications Commission, Common Carrier Dom. Earth Stations, P.O. Box 358160, Pittsburgh, PA 15251–5160.
f. Amendment of Application (per request	Written Request & FCC 155.	3,000.00	CAW	Federal Communications Commission, Common Carrier Dom. Earth Stations, P.O. Box 358160, Pittsburgh, PA 15251–5160.
g. Extension of Construction Permit/Launch Authorization (per request).	Written Request & FCC 155.	1,500.00	CXW	Federal Communications Commission, Common Carrier Dom. Earth Stations, P.O. Box 358160, Pittsburgh, PA 15251–5160.

[FR Doc. 93–3369; Filed 2–18–93; 8:45 am]

BILLING CODE 6712–01–M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 675

[Docket No. 921186–3021]

Groundfish of the Bering Sea and Aleutian Islands Area

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Closure.

SUMMARY: NMFS is closing the directed fishery for aggregate species in the rock sole/"other flatfish" fishery category by vessels using trawl gear in Bycatch Limitation Zone 1 (Zone 1) of the Bering Sea and Aleutian Islands management area (BSAI). This action is necessary to prevent exceeding the prohibited species bycatch allowance of red king crab to the trawl rock sole/"other flatfish" fishery category in Zone 1.

EFFECTIVE DATES: Effective 12 noon, Alaska local time (A.l.t.), February 16,

1993, through 12 midnight, A.l.t., December 31, 1993.

FOR FURTHER INFORMATION CONTACT: Martin Loefflad, Resource Management Specialist, Fisheries Management Division, NMFS, 907–586–7228.

SUPPLEMENTARY INFORMATION: The groundfish fishery in the BSAI exclusive economic zone is managed by the Secretary of Commerce according to the Fishery Management Plan for the Groundfish Fishery of the BSAI (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson Fishery Conservation and Management Act. Fishing by U.S. vessels is governed by regulations implementing the FMP at 50 CFR parts 620 and 675.

The 1993 prohibited species bycatch allowance of red king crab in Zone 1 for the trawl rock sole/"other flatfish" fishery category, which is defined at § 675.21(b)(4)(ii)(B), was established as 80,000 crabs by the 1993 final specifications filed with the Office of the Federal Register and effective on February 11, 1993, to be published in the **Federal Register** on February 17, 1993.

The Director of the Alaska Region, NMFS, has determined, in accordance with § 675.21(c)(1)(i), that the prohibited species bycatch allowance of red king crab for the trawl rock sole/"other flatfish" fishery in Zone 1 has been reached. Therefore, NMFS is prohibiting directed fishing for aggregate species in the rock sole/"other flatfish" fishery category by vessels using trawl gear in Zone 1 of the BSAI from 12 noon, A.l.t., February 16, 1993, through 12 midnight, A.l.t., December 31, 1993.

Directed fishing standards for applicable gear types may be found in the regulations at § 675.20(h).

Classification

This action is taken under 50 CFR 675.20 and is in compliance with E.O. 12291.

List of Subjects in 50 CFR Part 675

Fisheries, Reporting and recordkeeping requirements.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: February 12, 1993.

David S. Crestin,

Acting Director, Office of Fisheries Conservation and Management, National Marine Fisheries Service.

[FR Doc. 93–3870 Filed 2–16–93; 12:34 pm]

BILLING CODE 3510-22-M

Proposed Rules

Federal Register
Vol. 58, No. 32
Friday, February 19, 1993

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

SMALL BUSINESS ADMINISTRATION

13 CFR Part 121

Small Business Size Standards; Fixed Size Standard Levels

AGENCY: Small Business Administration.

ACTION: Proposed rule; withdrawal.

SUMMARY: On December 31, 1992, the Small Business Administration (SBA) proposed to revise its size standards regulations by reducing the number of fixed size standard levels to nine (57 FR 62515). SBA is hereby withdrawing this proposal so that the entire issue of the development of revised size standards may be given further consideration.

FOR FURTHER INFORMATION CONTACT: Ajoy K. Sinha, Size Standards Staff at (202) 205–6618.

SUPPLEMENTARY INFORMATION: On December 31, 1992, at 57 FR 62515, SBA published a Notice of Proposed Rulemaking (Notice) which proposed to revise SBA's size standards by reducing the number of fixed size standard levels to nine. This was to be achieved by retaining the five existing employee-based levels and establishing four new receipts-based levels.

By this Notice, SBA is withdrawing that publication in order to further review the issue of changes in its size standards. It is expected that publication of proposed rules which are needed to accomplish such changes will be made after that review is complete.

Dated: February 9, 1993.

Dayton J. Watkins,

Acting Administrator.

[FR Doc. 93–3854 Filed 2–18–93; 8:45 am]

BILLING CODE 8025–01–M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 92–NM–238–AD]

Airworthiness Directives; Boeing Model 737–200C Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to all Model 737–200C series airplanes. This proposal would require a one-time external detailed visual inspection to detect cracks of the fuselage skin in the lower lobe cargo compartment; repetitive internal detailed visual inspections to detect cracks of the frames in the lower lobe cargo compartment; and repair of cracked parts. This proposal is prompted by reports of cracking in the body frames between Body Stations 360 to 500B and between stringers 19 left and 25 left. The actions specified by the proposed AD are intended to prevent a cargo door from opening while the airplane is in flight, which could result in rapid decompression of the airplane.

DATES: Comments must be received by April 14, 1993.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM–103, Attention: Rules Docket No. 92–NM–238–AD, 1601 Lind Avenue, SW., Renton, Washington 98055–4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Thomas Rodriguez, Aerospace Engineer, Seattle Aircraft Certification Office, Airframe Branch, ANM–120S, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (206) 227–2779; fax (206) 227–1181.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 92–NM–238–AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM–103, Attention: Rules Docket No. 92–NM–238–AD, 1601 Lind Avenue, SW., Renton, Washington 98055–4056.

Discussion:

The manufacturer has reported that several operators of Boeing Model 737–200C series airplanes have recently discovered cracks on eight airplanes. The cracks were located in the body frames between Body Stations 360 to 500B and between stringers 19 left and 24 left, just below the main cargo door. One airplane had cracks in eight out of ten frames; the fail-safe chords on this airplane were also cracked at Body

Stations 400, 420 and 460. The affected airplanes had accumulated between 31,400 and 63,900 flight cycles and between 29,500 and 59,500 flight hours. The cracks are believed to have been caused by fatigue and damage from cargo handling. Fatigue cracking in this area could result in severed frames, fuselage skin damage, and loss of structural integrity of the remaining structure. This condition, if not corrected, could lead to a cargo door opening while the airplane is in flight, resulting in rapid decompression of the airplane.

The FAA has reviewed and approved Boeing Alert Service Bulletin 737–53A1160, dated October 24, 1991, that describes procedures for a one-time external detailed visual inspection to detect cracks of the fuselage skin between stringers 19 left and 25 left and at Body Stations 360 to 540; and a one-time internal detailed visual inspection to detect cracks of the frames between stringers 19 left and 25 left and at Body Stations 360 to 500B, in the lower lobe cargo compartment.

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would require a one-time external detailed visual inspection to detect cracks of the fuselage skin between stringers 19 left and 25 left and at Body Stations 360 to 540. The proposed AD would also require repetitive internal detailed visual inspections to detect cracks of the frames between stringers 19 left and 25 left and at Body Stations 360 to 500B, in the lower lobe cargo compartment. The inspection procedures would be required to be accomplished in accordance with the service bulletin described previously. The repair of cracked parts would be required to be accomplished either in accordance with the Boeing 737 Structural Repair Manual or in accordance with a method approved by the FAA, depending upon the size of the crack.

Operators should note that the proposed requirement for repetitive internal detailed visual inspections differs from the recommendations of the related service bulletin, which recommends only a one-time inspection. In consideration of the circumstances and all available information related to the findings described above, and based on the nature and location of the subject cracking, the FAA has determined that repetitive internal detailed visual inspections are necessary to ensure the continued operational safety of these airplanes.

There are approximately 100 Model 737 series 200C airplanes of the affected design in the worldwide fleet. The FAA estimates that 18 airplanes of U.S. registry would be affected by this proposed AD, that it would take approximately 12 work hours per airplane to accomplish the proposed actions, and that the average labor rate is $55 per work hour. Based on these figures, the total cost impact of the proposed AD on U.S. operators is estimated to be $11,880, or $660 per airplane. This total cost figure assumes that no operator has yet accomplished the proposed requirements of this AD action.

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation: (1) Is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

Boeing: Docket 92–NM–238–AD.

Applicability: All Model 737–200C series airplanes, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent a cargo door from opening in flight, resulting in rapid decompression of the airplane, accomplish the following:

(a) Prior to the accumulation of 29,000 flight cycles or within 250 flight cycles after the effective date of this AD, whichever occurs later, accomplish a one-time external detailed visual inspection to detect cracks of the fuselage skin between stringers 19 left and 25 left and at Body Stations 360 to 540, in accordance with Boeing Alert Service Bulletin 737–53A1160, dated October 24, 1991. If any crack is found, prior to further flight, accomplish the requirements of paragraph (a)(1) and (a)(2) of this AD:

(1) Perform an internal detailed visual inspection to detect cracks of the frames between stringer 19 left and 25 left and Body Stations 360 to 500B, in accordance with the service bulletin.

(2) Repair all cracks in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

(b) Within 3,000 flight cycles after completing the requirements of paragraph (a) of this AD, unless accomplished within the last 6,000 flight cycles prior to the effective date of this AD, perform an internal detailed visual inspection to detect cracks of the frames between stringers 19 left and 25 left and at Body Stations 360 to 500B in accordance with Boeing Alert Service Bulletin 737–53A1160, dated October 24, 1991. Thereafter, repeat the internal detailed visual inspection at intervals not to exceed 9,000 flight cycles. If any crack is found, prior to further flight, accomplish the requirements of paragraph (b)(1) or (b)(2) of this AD, as applicable:

(1) If any crack is found that does not exceed the limits specified in the Boeing 737 Structural Repair Manual (SRM), repair the crack in accordance with the Boeing 737 SRM.

(2) If any crack is found that exceeds the limits specified in the Boeing 737 SRM, repair the crack in accordance with a method approved by the Manager, Seattle ACO, FAA, Transport Airplane Directorate.

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(d) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the

requirements of this AD can be accomplished. Issued in Renton, Washington, on February 12, 1993.

Darrell M. Pederson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 93–3875 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–U

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14 CFR Part 39

[Docket No. 92–NM–246–AD]

Airworthiness Directives; McDonnell Douglas Model DC–9 and DC–9–80 Series Airplanes, and Model C–9 (Military) Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to certain McDonnell Douglas Model DC–9 and DC–9–80 series airplanes, and Model C–9 (military) airplanes. This proposal would require installing a water drain system in the slant pressure panel. This proposal is prompted by several reports of water runoff from the slant pressure panel which froze on the control assemblies. The actions specified by the proposed AD are intended to prevent freezing of water on the control cables, which could restrict the movement of the cables and result in reduced controllability of the airplane.

DATES: Comments must be received by April 14, 1993.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM–103, Attention: Rules Docket No. 92–NM–246–AD, 1601 Lind Avenue, SW., Renton, Washington 98055–4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from McDonnell Douglas Corporation, P.O. Box 1771, Long Beach, California 90846–1771, Attention: Business Unit Manager, Technical Publications—Technical Administrative Support, C1–L5B. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office (ACO), 3229 East Spring Street, Long Beach, California.

FOR FURTHER INFORMATION CONTACT: Ms. Dorenda Baker, Aerospace Engineer, Los Angeles Aircraft Certification Office, Airframe Branch, ANM–120L, FAA, Transport Airplane Directorate, 3229 East Spring Street, Long Beach, California 90806–2425; telephone (310) 988–5231; fax (310) 988–5210.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 92–NM–246–AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM–103, Attention: Rules Docket No. 92–NM–246–AD, 1601 Lind Avenue, SW., Renton, Washington 98055–4056.

Discussion

Recently, a McDonnell Douglas Model DC–9–32 series airplane experienced "frozen" aileron controls while in flight. Attempts to free the controls during flight were unsuccessful. Results of an inspection of the airplane after landing disclosed a large accretion of ice on the aileron and wing spoiler control cables located in the left main landing gear wheel well. The ice restricted movement of the aileron and speed brake cables, effectively disabling these controls. The ice was attributed to the freezing of water, which had pooled forward of the slant pressure panel and was blown onto the cables when the airplane was pressurized.

In addition, three operators of McDonnell Douglas Model DC–9 series airplanes have reported several instances of water runoff from the slant pressure panels in the left and right main landing gear wheel wells, which subsequently froze on the lateral control mixer and control cable assemblies.

Freezing of water on the control cables could restrict the movement of the cables and result in reduced controllability of the airplane.

The FAA has reviewed and approved McDonnell Douglas DC–9 Service Bulletin 53–179, dated January 18, 1985, as amended by Service Bulletin Change Notification 53–179 CN1, dated February 28, 1985, and Service Bulletin Change Notification 53–179 CN2, dated May 30, 1985, that describe procedures for installation of a water drain system in the slant pressure panels in the left and right main landing gear wheel wells. Installing a water drain system will allow water trapped forward of the panels to be drained overboard.

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would require installing a water drain system in the slant pressure panel. The actions would be required to be accomplished in accordance with the service bulletin and change notifications described previously.

There are approximately 1,109 McDonnell Douglas Model DC–9 and DC–9–80 series airplanes, and Model C–9 (military) airplanes of the affected design in the worldwide fleet. The FAA estimates that 1,071 airplanes of U.S. registry would be affected by this proposed AD, that it would take approximately 14 work hours per airplane to accomplish the proposed actions, and that the average labor rate is $55 per work hour. Required parts would cost approximately $680 per airplane. Based on these figures, the total cost impact of the proposed AD on U.S. operators is estimated to be $1,552,950, or $1,450 per airplane. This total cost figure assumes that no operator has yet accomplished the proposed requirements of this AD action.

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order

12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation: (1) Is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

McDonnell Douglas: Docket 92–NM–246–AD.

Applicability: Model DC–9–10, –20, –30, –40, and –50 series airplanes, Model DC–9–81 and –82 series airplanes, and Model C–9 (Military) airplanes; as listed in McDonnell Douglas DC–9 Service Bulletin 53–179, dated January 18, 1985, as amended by Service Bulletin Change Notification 53–179 CN1, dated February 28, 1985, and Service Bulletin Change Notification 53–179 CN2, dated May 30, 1985; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent freezing of water on the control cables, which could restrict the movement of the cables and result in reduced controllability of the airplane, accomplish the following:

(a) Within 12 months after the effective date of this AD, install a water drain system in the slant pressure panel in accordance with McDonnell Douglas DC–9 Service Bulletin 53–179, dated January 18, 1985, as amended by Service Bulletin Change Notification 53–179 CN1, dated February 28, 1985, and Service Bulletin Change Notification 53–179 CN2, dated May 30, 1985.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

(c) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the requirements of this AD can be accomplished.

Issued in Renton, Washington, on February 12, 1993.

Darrell M. Pederson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 93–3876 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–M

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14 CFR Part 71

[Airspace Docket No. 92–AEA–7]

Proposed Alteration of VOR Federal Airway V–106

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Proposed rule; withdrawal.

SUMMARY: This action withdraws the Notice of Proposed Rulemaking (NPRM), Airspace Docket No. 92–AEA–7, which was published in the **Federal Register** on August 19, 1992 (57 FR 37489). The NPRM proposed to alter VOR Federal Airway V–106 by extending that airway from the Johnstown, PA, VHF Omnidirectional Range/Tactical Air Navigation (VORTAC) to the Morgantown, WV, VORTAC. The FAA proposed to extend V–106 in support of a new arrival route to serve the Pittsburgh, PA, terminal area. The FAA has determined that this action is not necessary and withdrawing the proposal at this time is warranted. This action will provide an opportunity to reexamine the operations in the Pittsburgh, PA, terminal area.

FOR FURTHER INFORMATION CONTACT: Patricia P. Crawford, Airspace and Obstruction Evaluation Branch (ATP–240), Airspace-Rules and Aeronautical Information Division, Air Traffic Rules and Procedures Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone: (202) 267–9255.

SUPPLEMENTARY INFORMATION: On August 19, 1992, a Notice of Proposed Rulemaking was published in the **Federal Register** to amend 14 CFR part 71 of the Federal Aviation Regulations to alter V–106 by extending the airway from the Johnstown, PA, VORTAC to the Morgantown WV, VORTAC (57 FR 37489). This action was proposed to allow for a new arrival route in the Pittsburgh, PA, terminal area. No comments were received on the proposed amendment.

The FAA has decided to withdraw the proposal at this time to provide an opportunity to reexamine the operations in the Pittsburgh, PA, terminal area. This proposal was initiated in support of the new arrival route to serve the Pittsburgh, PA, terminal area. The FAA has determined that relocating an existing holding fix in lieu of this proposed action would better meet the needs of the airspace users.

List of Subjects in 14 CFR Part 71

Aviation safety, Domestic VOR Federal airways, Incorporation by reference.

The Withdrawal

In consideration of the foregoing, the Notice of Proposed Rulemaking, Airspace Docket No. 92–AEA–7, as published in the **Federal Register** on August 19, 1992 (57 FR 37489), is hereby withdrawn.

Authority: 49 U.S.C. app. 1348(a), 1354(a), 1510; E.O.10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389; 49 U.S.C. 106(g); 14 CFR 11.69.

Issued in Washington, DC, on February 10, 1993.

Harold W. Becker,

Manager, Airspace-Rules and Aeronautical Information Division.

[FR Doc. 93–3956 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–M

DEPARTMENT OF THE TREASURY

Fiscal Service

31 CFR Part 357

[Department of the Treasury Circular, Public Debt Series, No. 2–86]

Regulations Governing Book-Entry Treasury Bonds, Notes, and Bills

AGENCY: Fiscal Service, Treasury.

ACTION: Proposed rule; extension of comment period.

SUMMARY: This document extends until November 30, 1993, the deadline for submission of comments on the proposed rule to govern Treasury bonds, notes, and bills ("securities") held in the commercial book-entry system, also known as the Treasury/Reserve Automated Debt Entry System, or TRADES. The proposed rule was last published in the **Federal Register** on April 9, 1992 (57 FR 12244), as amended by notice published on May 13, 1992 (57 FR 20572).

DATES: Comments must be received on or before November 30, 1993.

ADDRESSES: Comments should be sent to: Office of the Chief Counsel, Bureau of the Public Debt, room 503, E Street Building, Washington, DC 20239–0001. Comments received will be available for public inspection and copying at the Department of the Treasury Library, 1500 Pennsylvania Avenue, NW., Washington, DC 20220.

FOR FURTHER INFORMATION CONTACT: Calvin Ninomiya, Chief Counsel (202) 319–3320, or Cynthia Reese, Deputy Chief Counsel (202) 219–3320.

SUPPLEMENTARY INFORMATION: In 1986, Treasury published for comment proposed rules to govern Treasury marketable securities held in the commercial book-entry system or "TRADES" (see 51 FR 8846; 51 FR 43027). A revised proposal was published on April 9, 1992 (57 FR 12244), with September 8, 1992, as the deadline for submission of comments. The comment period was extended to March 8, 1993, by notice published July 29, 1992 (57 FR 33470).

The preamble to the April 9 proposal noted the efforts by several groups examining issues in this area of the law, notably the work of the National Conference of Commissioners on Uniform State Laws ("NCCUSL") Drafting Committee to Revise Uniform Commercial Code, Article 8. The preamble also expressed Treasury's view that it would ultimately be desirable, to the extent possible, to have the same law apply to U.S. Treasury book-entry securities as applies to other securities held in similar fashion. To that end, the comment period on the proposal was extended to March 8, 1993, taking into account the longer time frame foreseen for developing rules that will govern securities transactions under a uniform State law, and for assessing their suitability for Treasury securities.

The Article 8 revision effort is proceeding rapidly; it is expected that a final version of the new uniform law will be considered and approved at NCCUSL's annual meeting in August. This has prompted requests from various groups and market participants to further extend the comment period on the proposed TRADES rule to permit its fuller analysis in the light of the final NCCUSL product. Treasury agrees, given the advantages of uniformity, that this would be both desirable and appropriate. It would be consistent with Treasury's original interest in fostering uniformity and certainty in the rules governing book-entry securities, given the lack thereof under State law.

For these reasons, the comment period on the proposed rule on TRADES is being further extended to November 30, 1993. Assuming that the revised Article 8 is considered and approved by NCCUSL this summer, the new deadline should provide sufficient time for the preparation of comments on the TRADES rule, taking account of the revised Article. Those who are able to do so are encouraged to submit comments in advance of the deadline. Treasury requests commenters to include, in particular, their views on the issue as to whether, and to what extent, the revised Article 8 rules on the holding of securities through intermediaries should be adopted by Treasury as the law for Treasury securities held in the commercial book-entry system, explaining their reasons therefor.

Dated: February 12, 1993.

Richard L. Gregg,

Commissioner of the Public Debt.

[FR Doc. 93–3893 Filed 2–18–93; 8:45 am]

BILLING CODE 4810-39-M

DEPARTMENT OF TRANSPORTATION

Maritime Administration

46 CFR Part 315

[Docket No. R–138]

RIN 2133–AA91

Agency Agreements and Appointment of Agents

AGENCY: Maritime Administration, Department of Transportation.

ACTION: Notice of proposed rulemaking.

SUMMARY: The National Shipping Authority (NSA) within the Maritime Administration (MARAD) proposes to revise its regulations on Agency Agreements, to broaden its scope to include appointment of agents as ship managers and to incorporate therein provisions now found in other regulatory parts which are being removed in separate rulemaking actions. This rulemaking would state MARAD's policy and procedure for appointing agents and administering Service Agreements and Ship Manager Contracts. This includes a change in the citizenship requirements for appointment as an agent to harmonize with less restrictive requirements of the Department of Defense.

DATES: Comments must be received on or before April 20, 1993.

ADDRESSES: Send an original and two copies of comments to the Secretary, Maritime Administration, room 7300, Department of Transportation, 400 7th Street, SW., Washington, DC 20590. To expedite review of the comments, the Agency requests, but does not require, the submission of an additional ten (10) copies. All documents will be made available for inspection during normal business hours at the above address. Commenters wishing MARAD to acknowledge receipt of comments should enclose a stamped self-addressed envelope.

FOR FURTHER INFORMATION CONTACT: Tim Roark, Chief, Division of Marine Acquisition, Maritime Administration, 400 Seventh Street, SW., Washington, DC 20590, Tel. (202) 366–1943.

SUPPLEMENTARY INFORMATION: The NSA is a continuing entity within MARAD, and the Maritime Administrator serves as the Director. In peacetime, the NSA does not have a distinct organizational structure, and the authority of the Director is delegated to the Associate Maritime Administrators, respectively, for Shipbuilding and Ship Operations, and for Marketing. The NSA operates as a separate component of MARAD when necessary to meet the requirements of national security emergencies. NSA regulations are published at 46 CFR parts 315 through 340, and 345 through 347. These regulations govern the activities of General Agents, Berth Agents, Ship Managers and Federal Port Controllers in emergency ship operation and related activities, as well as in the control and utilization of ports during national emergencies.

The existing regulations at 46 CFR part 315 set forth the terms of Agency Agreements (Service Agreements), either in the form of a General Agency Agreement or a Berth Agency Agreement, between the United States, acting by and through the Director, NSA, and private business organizations. Under these Agreements, the private organizations act as either General Agent or Berth Agent. Part 316 now prescribes requirements for an applicant to become a General Agent or Berth Agent, while part 319 now defines the duties of Berth Agents and General Agents. Part 331 sets forth the

responsibilities of an operator (Agent) to strip and deactivate MARAD-owned ships preparatory to permanent layup in the National Defense Reserve Fleet (NDRF). An Agent is a person, firm or corporation that conducts the business of one or more vessels assigned to it under the terms of a Service Agreement with the United States. A General Agent has the responsibility to operate, manage and conduct the business of one or more vessels, of which the United States is owner or owner *pro hac vice*, pursuant to the terms of a Service Agreement with the United States, and must meet the criteria for ownership of vessels eligible for documentation under the laws of the United States, as set forth at 46 U.S.C. 12102. A Berth Agent must meet the same criteria to conduct the shoreside business of vessels assigned to a General Agent at one or more specified locations while operating in one or more specific services or trades, under the terms of a Service Agreement.

MARAD has adopted a revised Service Agreement for General Agents and has adopted a Ship Manager Contract. Pursuant to the terms of the Service Agreement, the United States appoints a General Agent, as its agent and not as an independent contractor, to manage and conduct the business of one or more vessels of which the Government is owner or owner *pro hac vice*, as may, from time to time, be assigned for urgent or compelling reasons to the General Agent. Pursuant to the terms of the Ship Manager Contract, the United States appoints a Ship Manager as its agent, in some respects, and as an independent contractor to manage and conduct the business of one or more vessels of which the Government is owner or owner *pro hac vice*. The terms of the revised Service Agreement do, and will continue to, incorporate by reference pertinent clauses contained in the Federal Acquisition Regulation (48 CFR chapter 1) and Department of Transportation Acquisition Regulation (48 CFR chapter 12). MARAD has also adopted an Application for Appointment as General Agent.

As proposed to be revised, the regulations at 46 CFR part 315 would formalize MARAD's revised policy for appointing agents and administering Service Agreements and Ship Manager Contracts. It would reflect a change in policy with respect to the citizenship requirements for appointment as an agent to harmonize with that of the Department of Defense with respect to the appointment of agents performing services related to the operation and management of vessels. Specifically, it would eliminate the requirement that an agent be a citizen of the United States as defined at 46 App. U.S.C. 802. Thus, for example, a corporation eligible to document a vessel under the provisions of 46 U.S.C. 12102 would be deemed eligible to be appointed by MARAD as an agent.

Parts 316, 319 and 331 are being removed by other rulemaking and their subject matter, incorporating revised procedures adopted by MARAD, would be merged into revised part 315.

Rulemaking Analyses and Notices

Executive Order 12291 (Federal Regulation) and DOT Regulatory Policies and Procedures

This rulemaking has been reviewed under Executive Order 12291, and it has been determined that this is not a major rule. It will not result in an annual effect on the economy of $100 million or more. There will be no increase in production costs or prices for consumers, individual industries, Federal, State or local governments, agencies, or geographic regions. Furthermore, it will not adversely affect competition, employment, investment, productivity, innovation, or the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

This rulemaking does not involve any change in important Department policies, and it is considered non-significant under the DOT regulatory policies and procedures (44 FR 11034, February 25, 1979). Since the magnitude of the economic impact will be minimal, further regulatory evaluation is unnecessary.

Federalism

MARAD has analyzed this rulemaking in accordance with the principles and criteria contained in Executive Order 12612 and has determined that these regulations do not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Regulatory Flexibility Act

MARAD certifies that this regulation will not have a significant economic impact on a substantial number of small entities.

Environmental Assessment

The Maritime Administration has considered the environmental impact of this rulemaking and has concluded that there is no environmental impact and an environmental impact statement is not required under the National Environmental Policy Act of 1969.

Paperwork Reduction Act

This rulemaking contains no reporting requirements that require approval by the Office of Management and Budget pursuant to provision of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*).

List of Subjects in 46 CFR Part 315

Government contracts, vessels.

Accordingly, MARAD hereby proposes to revise 46 CFR part 315 to read as follows:

PART 315—AGENCY AGREEMENTS AND APPOINTMENT OF AGENTS

315.1 Purpose.
315.3 Definitions.
315.5 Appointment of agents.
315.7 Administration of agency agreements.
315.9 Duties of agents.
315.11 Vessel deactivation procedure.

Authority: 50 U.S.C. App. 1744; 49 CFR 1.66.

§ 315.1 Purpose.

This part summarizes the procedures governing the award and administration of Agency Agreements in the form of Service Agreements and Ship Manager Contracts entered into between the United States of America, acting by and through the Director, National Shipping Authority (NSA) and the Maritime Administration, Department of Transportation, and Agents who will manage or otherwise conduct the business of one or more vessels owned, controlled or time-chartered by the United States, which vessel(s) may be assigned to Agents from time to time pursuant to the specific provisions of a Service Agreement or Ship Manager Contract.

§ 315.3 Definitions.

(a) *Agent* includes a General Agent, Berth Agent and Ship Manager designated as such under a standard form of Service Agreement or Ship Manager Contract to manage and conduct the business of vessels of which the United States is owner, owner *pro hac vice* or time charterer.

(b) *Citizen of the United States* means an individual who is a citizen of the United States by birth, naturalization or as otherwise authorized by law.

(c) *Director, National Shipping Authority, or Director* means the Maritime Administrator. It also means the Associate Administrator for Shipbuilding and Ship Operations, or the Associate Administrator for Marketing, respectively, when the NSA is operating under authority delegated by the Maritime Administrator.

(d) *NDRF* means a National Defense Reserve Fleet site.

(e) *United States* means the States of the United States, Guam, Puerto Rico, the Virgin Islands, American Samoa, the District of Columbia, the Commonwealth of the northern Mariana Islands and any other territory or possession of the United States.

§ 315.5 Appointment of agents.

(a) *Eligibility.* The Director shall restrict appointment as Agent to qualified applicants. Each applicant shall establish eligibility according to procedures that may be obtained from MARAD, shall demonstrate the necessary ability, experience and resources as an operator of vessels or ports, or shoreside husbander of vessels, and shall continue to meet all such requirements throughout the term of the appointment. In addition, an applicant shall meet the following criteria, depending on its characteristics as an individual or other form of business entity:

(1) *Individual.* An individual who is a Citizen of the United States;

(2) *Partnership.* A partnership whose general partners are Citizens of the United States, and the controlling interest in the partnership is owned by Citizens of the United States;

(3) *Corporation.* A corporation established under the laws of the United States or of a State, whose president or other chief executive officer and chairman of its board of directors are Citizens of the United States and no more of its directors are noncitizens than a minority of the number necessary to constitute a quorum; and

(4) *Other entities.* An association, trust, joint venture, or other entity—

(i) All of whose members are Citizens of the United States; and

(ii) That is capable of holding title to a vessel under the laws of the United States or of a State;

(b) *Procedures.* Information about procedures for appointment as General Agent, Berth Agent or Ship Manager may be obtained from, and inquiries and other written communications shall be submitted to, the Maritime Administration, Attn: Office of Acquisition, MAR–383, Department of Transportation, 400 Seventh Street SW., Washington, DC 20590, tel. (202) 366–1943. Inquiries should be made during normal business hours.

(c) *Approval.* After final approval of an Agent by MARAD, the contracting office shall transmit the Service Agreement or Ship Manager Contract to the Agent for execution and return to MARAD.

(d) *Agreements.* The standard text of the Service Agreement and Ship Manager Contract may be obtained from the Office of Acquisition at the address appearing in paragraph (b) of this section, by mail or in person during normal business hours.

§ 315.7 Administration of agency agreements.

(a) *Amendments.* The MARAD contracting office shall prepare modifications to all Service Agreements and Ship Manager Contracts that are required due to changes in the Federal Acquisition Regulation or Transportation Acquisition Regulation, or changes in MARAD policy or procedure.

(b) *Annual review of General Agent representations and certifications.* The contracting office shall require that each General Agent certify annually that all representations and certifications incorporated in a Service Agreement are current, complete and accurate, or provide new representations and certifications.

§ 315.9 Duties of agents.

The Agent shall perform all duties prescribed in the Service Agreement or Ship Manager Contract and shall be guided by such directions, orders or regulations as may be issued by MARAD.

§ 315.11 Vessel deactivation procedure.

When an Agent is responsible as vessel operator to decommission and deliver a vessel to the NDRF, that Agent shall observe all the procedures and requirements prescribed by MARAD contained in instructions which may be obtained from the MARAD Division of Reserve Fleet (MAR–743) at the address specified in section 315.5(b) of this part. Tel. (202) 366–5752.

By Order of the Director, National Shipping Authority.

Dated: February 12, 1993.

James E. Saari,

Secretary, Maritime Administration.

[FR Doc. 93–3865 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–81–M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 64

[CC Docket No. 92–256; DA 93–89]

Application of Open Network Architecture and Nondiscrimination Safeguards to GTE Corporation

AGENCY: Federal Communications Commission.

ACTION: Proposed rule; extension of comment period.

SUMMARY: This order extends the time to file comments and reply comments in response to the Commission's Notice of Proposed Rulemaking in CC Docket No. 92–256 (Application of Open Network Architecture and Nondiscrimination Safeguards to GTE Corporation, 57 FR 62544 (12/31/92)). GTE requested a thirty-day extension of time to file comments and reply comments. The order grants in part GTE's request by extending the comment and reply comment deadlines by twenty-one days.

DATES: Comments must be submitted on or before February 22, 1993 and reply comments must be submitted on or before March 24, 1993.

ADDRESSES: Federal Communications Commission, Office of the Secretary, 1919 M Street, NW., Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: John S. Morabito, (202) 632–1290, Policy and Program Planning Division, Common Carrier Bureau.

SUPPLEMENTARY INFORMATION:

Summary

1. On November 5, 1992, the Commission adopted a Notice of Proposed Rulemaking (NPRM) proposing to apply to GTE Corporation (GTE) the same regulatory framework of Open Network Architecture and nondiscrimination safeguards that applies to the Bell Operating Companies' participation in the enhanced services market. See Application of Open Network Architecture and Nondiscrimination Safeguards to GTE Corporation, Notice of Proposed Rulemaking, CC Docket No. 92–256, FCC 92–495, adopted November 5, 1992. The Commission requested comment on the NPRM by February 1, 1993 and reply comment by March 3, 1993.

2. On January 25, 1993, GTE requested a thirty-day extension of time to file comments and reply comments. GTE stated that it was critically important to them that a carefully prepared and complete submission be made. GTE also stated that the personnel working on GTE's comments in this proceeding are heavily committed to working on comments in other proceedings. See Transport Rate Structure and Pricing, CC Docket No. 91–213 (comments due February 1, 1993); Expanded Interconnection with Local Telephone Companies, CC Docket No. 91–141 (petition for reconsideration comments due February 3, 1993).

3. In light of the importance of the issues presented in this proceeding, we conclude that the public interest would be served by allowing GTE and other

interested parties some additional time for filing comments. A brief extension additionally would not unduly delay the timely completion of this proceeding. We therefore grant in part GTE's request for an extension of time. We will extend by 21 days the deadline for interested parties to file comments and reply comments in this proceeding.

4. Accordingly, *it is ordered that,* Pursuant to the authority contained in sections 4(i) and 5(c) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i) and 155(c), and sections 0.91, 0.291, and 1.46 of the Commission's rules, 47 CFR 0.91, 0.291, and 1.46, the times for filing comments and reply comments in this proceeding are extended to February 22, 1993 and March 14, 1993, respectively.

List of Subjects in 47 CFR Part 64

Communications common carriers, Radio, Reporting and recordkeeping requirements, Telegraph, telephone, and computer technology.

Federal Communications Commission.

James D. Schlichting,

Chief, Policy and Program Planning Division.

[FR Doc. 93–3847 Filed 2–18–93; 8:45 am]

BILLING CODE 6712-01-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 301

[Docket No. 930219–3019]

Pacific Halibut Fisheries

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Proposed rule; notice of proposed catch sharing plan; request for comments.

SUMMARY: NMFS proposes to approve and implement a 1993 Catch Sharing Plan (Plan) developed by the Pacific Fishery Management Council (Council) in accordance with the Northern Pacific Halibut Act of 1982 to allocate the total allowable catch (TAC) of Pacific halibut between treaty Indian, non-Indian commercial, and non-Indian sport fishermen off the coasts of Washington, Oregon, and California (International Pacific Halibut Commission (IPHC) statistical Area 2A). The Plan also divides the sport fisheries allocation into geographic areas and times. In addition, NOAA is proposing a rule to specify the seasons, quotas, and bag limits in each of the sport fishery areas necessary to achieve the allocations in the Plan. The proposed rule also provides for flexible inseason management measures for the sport fisheries to achieve the allocations in each geographic area. The intent of this action is to carry out the responsibility of the Council to allocate the 1993 TAC of Pacific halibut among commercial, sport, and treaty Indian fishermen.

DATES: Comments on the catch sharing plan must be received on or before February 26, 1993, and comments on the proposed rule must be received by March 5, 1993.

ADDRESSES: Send comments to Rolland A. Schmitten, Director, Northwest Region, NMFS, 7600 Sand Point Way NE., Seattle, WA 98115.

FOR FURTHER INFORMATION CONTACT: Joe Scordino, 206–526–6140.

SUPPLEMENTARY INFORMATION: The Northern Pacific Halibut Act of 1982 (Halibut Act) at 16 U.S.C. 773c provides that the Secretary of Commerce (Secretary) shall have general responsibility to carry out the Halibut Convention between the United States and Canada, and that the Secretary shall adopt such regulations as may be necessary to carry out the purposes and objectives of the Convention and the Halibut Act. The Halibut Act at 16 U.S.C. 773c(c) also authorizes the Regional Fishery Management Council having authority for the geographic area concerned to develop regulations governing the Pacific halibut catch in U.S. Convention waters that are in addition to, but not in conflict with, regulations of the IPHC. Pursuant to this authority, NOAA directed the Pacific and North Pacific Fishery Management Councils to allocate halibut catches should such allocation be necessary. In compliance with this directive, the Council has developed catch sharing plans since 1988 to allocate the TAC of Pacific halibut between treaty Indian, non-Indian commercial, and non-Indian sport fisheries in Area 2A off Washington, Oregon, and California.

For 1993, the Council, at its September 1992 public meeting, proposed to continue the 1992 allocation approved by the Assistant Administrator for Fisheries, NOAA, (Assistant Administrator), on the behalf of the Secretary, with some minor revisions within the sport fisheries to season dates and bag limits. The Council advised the public of its intent to continue the Plan in its September 1992 newsletter and invited public comments for consideration at its November 1992 public meeting when final action would be taken. At its November 1992 public meeting, after considering public comments and recommendations from the states developed during state-sponsored public workshops on Pacific halibut sport fisheries, the Council took final action on its recommendation for a 1993 Catch Sharing Plan that retained the 1992 percentage allocations of the Area 2A TAC between user groups. All aspects of the Council's 1993 Plan are the same as the 1992 Plan except for some revisions to the sport fisheries provisions that were necessary to better achieve the allocations between sport fishery areas.

The Council made several changes to the Washington sport fishery portion of the 1992 Plan (applicable to the ocean fishery from inside Puget Sound, and south as far as Cape Falcon, Oregon) to address an unanticipated increased catch success in the south coast area (Queets River, Washington, to Cape Falcon). Until 1992, sport catches of halibut were incidental to other fisheries and the Council's allocation objective was to provide anglers the opportunity to retain halibut caught incidental to other target species. This changed in 1992 when sport fishermen had success in targeting on halibut. In order to acknowledge that targeted sports fishing does occur off the south Washington coast, the Council proposed the following two revisions to the 1992 Plan beginning in 1993: (1) The Washington allocation objective for the south coast area would be modified because the sport halibut fishery in this area is not only an incidental catch fishery, and to stipulate that the allocation intent is to provide stability and maximize season length; and (2) the division of the Washington sport allocation between the three Washington areas would be revised to provide additional harvest opportunity to the south coast area if the 1993 TAC is above the 1992 level. This approach provides additional opportunity in the south coast area only if the TAC increases, thereby maintaining the status quo (1992 level) fishing opportunity in the other two areas. The 1993 Plan provides that all of the increased allocation to the Washington sport fisheries at TAC's above the 1992 level of 650,000 pounds (294.8 mt) up to a TAC of 672,000 pounds (304.8 mt) would be allocated to the south coast area. If the Area 2A TAC is above 672,000 pounds (304.8 mt), the division of the Washington sport allocation between the three areas would change from 32.5 to 31 percent for the Washington inside waters (Puget Sound/Straits) area, from 62.3 to 61 percent for the Washington north coast area, and from 5.2 to 8 percent for the

southern Washington/northern Oregon (north of Cape Falcon) area.

The Council made several changes to the Oregon sport fishery portion of the 1992 Plan (applicable to the fishery off California and Oregon south of Cape Falcon) to address unused allocations in 1991 and 1992. Low harvests during the later seasons (July and August) in the Oregon sport fisheries in 1991 and 1992 resulted in unused allocation that could have been better utilized to provide additional fishing opportunity to the early (May) Oregon sport seasons. For example, the July sport fishery (in the area inside the 30-fathom curve) had harvests of 834 pounds (0.38 mt) in 1991 and 706 pounds (0.32 mt) in 1992, while the allocation was 8,100 and 8,333 pounds (3.7 and 3.8 mt) respectively. To address the problem of underutilized allocations and provide additional opportunity to all Oregon sport users, the Council revised the 1992 division of the Oregon sport allocation for the area between Cape Falcon and the California border as follows beginning in 1993: (1) The early season opening in May would be changed from 68 percent to 80 percent; (2) the July season in the area inside 30 fathoms would be changed from 9 percent to 3 percent; and (3) the August season would be changed from 23 percent to 17 percent.

The Council reduced the bag limit in the Washington north coast area to one fish per person consistent with inseason changes made in 1992 to better achieve allocation objectives for this area. The Washington inside waters sport fishing season exceeded its catch projection in 1992 due to increased catch success, so the 1993 Plan would reduce the sport season to ensure that the catch projections are not exceeded in 1993. Lastly, the Council stipulated the opening dates, days open per week, and season lengths for each sport fishing area in the 1993 Plan at the 1992 TAC level as well as if the TAC increased or decreased.

The Council developed the 1993 proposed catch sharing plan before the IPHC set the 1993 TAC for Area 2A and included specific measures for various levels of TAC. The IPHC subsequently approved an Area 2A TAC of 600,000 pounds (272.2 mt) at its annual meeting on January 25–28, 1993, in Vancouver, British Columbia. The 1993 Catch Sharing Plan adopted by the Council for a TAC of 600,000 pounds (272.2 mt) and proposed for approval by the Secretary is as follows.

Proposed 1993 Catch Sharing Plan

The proposed 1993 Catch Sharing Plan (Plan) would allocate 25 percent of the Area 2A TAC to Washington treaty Indian tribes in Subarea 2A–1, and 75 percent to non-Indian fishermen in Area 2A. The allocation to non-Indian fishermen would be divided 50 percent to commercial users and 50 percent to sport users. The sport allocation would be further divided 61 percent to areas off Washington and 39 percent to areas off Oregon and California. The sport fisheries are divided into geographic areas, each having separate seasons, quotas, bag limits, and other restrictions. The Washington sport allocation applies to the coastal and inland waters off Washington, as well as waters off the coast of Oregon north of Cape Falcon. The Oregon sport allocation applies to waters off Oregon south of Cape Falcon and includes the California coast. The allocations are distributed as sub-quotas to ensure that any overage or underage by any one user group will not affect achievement of the allocation of TAC for other user groups. The Plan distributes the 600,000 pound (272.2 metric tons) TAC in Area 2A as sub-quotas between users as follows:

Treaty Indian sub-quota.	150,000 pounds (68.0 mt).
Non-Indian commercial sub-quota.	225,000 pounds (102.1 mt).
Washington sport sub-quota.	137,250 pounds (62.3 mt).
Oregon sport sub-quota.	87,750 pounds (39.8 mt).
Total	600,000 pounds (272.2 mt).

The specific allocative measures proposed at the 1993 TAC of 600,000 pounds (272.2 mt) in the treaty Indian, non-Indian commercial and non-Indian sport fisheries in Area 2A is described below.

Treaty Indian Fisheries

Twenty-five percent of the Area 2A TAC would be allocated to 12 treaty Indian tribes in Subarea 2A–1 as defined in 50 CFR 301.19(b) (57 FR 12884, April 14, 1992). The treaty Indian allocation is to provide for a tribal commercial fishery and a ceremonial and subsistence fishery. These two fisheries are to be managed separately; any overages in the commercial fishery would not affect the ceremonial and subsistence fishery. The commercial fishery will be managed to achieve an established sub-quota, while the ceremonial and subsistence fishery will be managed for a year-round season. The tribal ceremonial and subsistence fishery will commence on January 1 and continue year-round through December 31. No size or bag limits will apply to the ceremonial and subsistence fishery, except that when the tribal commercial fishery is closed, treaty Indians may take and retain not more than two halibut per day per person. The tribal estimate of ceremonial and subsistence catch for a year-round fishery in 1993 is 14,000 pounds (6.4 mt). The tribal commercial fishery is allocated a sub-quota of 136,000 pounds (61.7 mt) which is equal to the tribal allocation of 150,000 pounds (68.0 mt) less the tribal estimate of ceremonial and subsistence catch for a year-round season. The tribal commercial fishery will commence on March 1 and continue through October 31 or until the tribal commercial sub-quota is taken, whichever occurs first. Any halibut sold by treaty Indians during the commercial fishing season must comply with the IPHC regulations on size limits for the non-Indian fishery. Halibut taken for ceremonial and subsistence purposes may not be offered for sale or sold. Regulations necessary for the treaty Indian allocative measures will be implemented in the 1993 IPHC regulations.

Commercial Fisheries (Non-Indian)

The non-Indian commercial fisheries would be allocated 37.5 percent of the Area 2A TAC. The proposed Plan does not address the structuring of the commercial season(s). The commercial fishery opening date(s), duration and vessel trip limits for Area 2A, as necessary to ensure that the sub-quota for this fishery is not exceeded, are determined by the IPHC.

Sport Fisheries (Non-Indian)

The non-Indian sport fisheries would be allocated 37.5 percent of the Area 2A TAC. The sport fishery allocation is further divided with 22.9 percent of the Area 2A TAC to areas off Washington/northern Oregon and 14.6 percent to areas off Oregon/California. The sport fisheries are divided into five geographic areas, each having separate seasons, sub-quotas, bag limits, and other restrictions as necessary to achieve allocation objections. The Washington sport allocation applies to the coastal and inland waters off Washington and includes the north coast of Oregon, north of Cape Falcon. The Oregon sport allocation applies to waters off Oregon south of Cape Falcon and includes the California coast.

The Washington sport fisheries structuring is based on the following allocation objectives adopted by the Council.

1. Provide a stable sport opportunity for anglers in inside waters, and provide incentive to anglers to fish in Puget Sound with a two fish bag limit.

2. Maximize the season length for viable fishing opportunity on the remote

halibut grounds off northwest Washington and stagger the seasons to spread out this opportunity to maximize the benefit to anglers who utilize these grounds.

3. On the south coast, structure the season to ensure stability and maximize the season length during time periods when sport salmon fishing opportunities are not available.

The Oregon sport fisheries structuring is based on the following allocation objectives adopted by the Council.

1. Provide special opportunity for anglers out of Pacific City and Garibaldi, where a long-standing relatively small fishery has existed.

2. Provide early opportunity to anglers along the central and south coast of Oregon especially Newport anglers.

3. Provide opportunity for anglers out of all Oregon ports south of Cape Falcon, especially small boat anglers.

4. Provide a short period of opportunity for all ports south of Cape Falcon and allow charterboats and larger private boats to fish productive areas in deeper water off Newport.

5. Provide anglers in California the opportunity to fish in a fixed season.

The details of the sport fisheries structuring for the five sport fishery areas are as follows.

Washington Inside Waters (Puget Sound and Straits)

This area is allocated 32.5 percent of the Washington sport sub-quota at the 1993 TAC level of 600,000 pounds (272.2 mt). The season in this area is open 6 days per week (closed Wednesdays) from about May 10 to July 17 for a projected catch of 44,606 pounds (20.2 mt). Due to the inability to monitor the catch in this area inseason, no inseason adjustments will be made and estimates of actual catch will be made post-season. The daily bag limit is two halibut per person per day with no size limit.

Washington North Coast Between the Straits and Queets River

This area is allocated 62.3 percent of the Washington sport sub-quota at the 1993 Area 2A TAC of 600,000 pounds (272.2 mt). The area allocation is further divided with 85 percent to be used in a spring fishery (opening in May) and 15 percent for a summer fishery (opening in July). The spring fishery will open on May 1 and continue 7 days per week until 85 percent of the sub-quota is taken. The summer fishery will open on July 2 for 2 days per week (Fridays and Saturdays) and continue until September 30 or until the area sub-quota is taken, whichever occurs first. The daily bag limit is one halibut per person per day with no size limit.

Southern Washington/Northern Oregon (Between Queets River and Cape Falcon, OR)

This area is allocated 5.2 percent of the Washington sport sub-quota at the 1993 Area 2A TAC of 600,000 pounds (272.2 mt). The season will open 2 days per week (Thursdays and Fridays) from about May 20 to June 10. If allowable harvest for this area remains after this season, it will open again on July 2 on Fridays only and continue until September 30 or until the area sub-quota is taken, whichever occurs first. The daily bag limit is one halibut per person per day with no size limit.

South of Cape Falcon to the California Border

This area is allocated 97.4 percent of the Oregon sport sub-quota. The daily bag limit for all seasons in this area is two halibut per person per day, one with a minimum 32-inch size limit and the second with a minimum 50-inch size limit. Eighty percent of this area sub-quota is for a May 1 opening that is divided into two regions, each with a sub-quota. The remainder is for a July 12 opening (3 percent) and a August 4 opening (17 percent). At the 1993 Area 2A TAC of 600,000 pounds (272.2 mt), the four seasons are as follows.

1. The region south of Cape Falcon and north of the Nestucca Bay entrance (latitude 45°09'45" N.) is allocated 3 percent of the area sub-quota for a May 1 opening. The season will open on May 1 and continue every day until July 11 or until 3 percent of the sub-quota is estimated to have been taken, whichever occurs first.

2. The region south of Nestucca Bay entrance and north of California border is allocated 77 percent of the area sub-quota for a May 1 opening. The season will open on May 1 and continue 5 days per week (Wednesday through Sunday) until July 11 or until 77 percent of the sub-quota is estimated to have been taken, whichever occurs first.

3. This season, applying to the entire area, will open on July 12 in waters inside the 30-fathom curve and will continue every day until August 3 or until 3 percent of the sub-quota is estimated to have been taken, whichever occurs first.

4. The last season, also applying to the entire area, will open on August 4, with no depth restrictions. The fishery is open 5 days per week, Wednesday through Sunday until September 30 or until the area sub-quota is estimated to have been taken, whichever occurs first.

Any poundage remaining after the earlier seasons will be added to the next season. If poundage added to the last season is sufficient to allow for additional fishing opportunity, an inseason action should be taken to add additional open days to each week.

California—South of the California Border

This area is allocated 2.6 percent of the Oregon sport sub-quota. The daily bag limit is one halibut per person per day with a minimum 32-inch size limit. At the 1993 Area 2A TAC of 600,000 pounds (272.2 mt), the season will commence on May 1 and continue every day until September 30. Due to the inability to monitor inseason, no inseason adjustments will be made and estimates of actual catch will be made post-season.

Specific regulations to implement portions of the proposed 1993 Plan will be promulgated by the IPHC and published by NMFS in the **Federal Register**. The IPHC, consistent with its responsibilities under the international convention, will implement the sub-quotas based on its final determination of a 1993 Area 2A TAC of 600,000 pounds (272.2 mt) made at its annual meeting on January 25–28, 1993, in Vancouver, British Columbia. NMFS proposes to implement the sport fishery portion of the above-described catch sharing plan, as applied to the Area 2A TAC, through this rulemaking proceeding.

In the past, the Plan has been implemented by the regulations of the IPHC, the international body that administers the Halibut Convention. This proposed rule would bring allocation measures for the 1993 non-Indian sport fishery in Area 2A under the regulations of the Secretary. This change is warranted because most of the sport fishery structuring (i.e., seasons, days of the week, and bag limits) is necessary only for purposes of allocating to sport fishery participants. Because the IPHC is primarily responsible for conservation and ensuring that quotas and sub-quotas are not exceeded, while the Secretary is responsible for domestic allocation, this proposed rule places the responsibility for sport fishery seasons and bag limits with the Secretary consistent with the Secretary's responsibility for domestic allocation actions. With this change in regulatory responsibility, the Council also recommended that the Secretary implement an inseason management process for sport fisheries whereby minor inseason changes to fishing periods, fishing days, and bag and size limits could be made by NMFS in

consultation with the affected states, the Council Chairman and staff, and IPHC staff. The inseason adjustments contemplated by this process are intended to better achieve the allocation objectives without affecting the established sub-quotas. Public notice of any inseason modifications to the sport regulations will be published in the **Federal Register**. The text of this inseason flexibility framework is in paragraph (d)(3) of the proposed rule. The responsibility for closing a fishery based on achievement of a sub-quota will remain with the IPHC. Paragraph (d)(1) of the proposed rule is reserved for the 1993 sport catch limits to be specified under IPHC regulations.

Classification

A regulatory impact review prepared by the Council for the 1992 Plan to fulfill the requirements of E.O. 12291 indicates that actions taken under the Plan are not "major" and a Regulatory Impact Analysis is not required. These findings also apply to the proposed 1993 Plan because it is a continuation of the prior Plans approved in 1990, 1991, and 1992. Because the proposed 1993 Plan is consistent with catch sharing plans that have been in place since 1990, it will not have a significant economic impact on a substantial number of small entities and, therefore, does not require a regulatory flexibility analysis under the Regulatory Flexibility Act. An Environmental Assessment (EA) was prepared for the 1990 IPHC regulations incorporating the 1990 Catch Sharing Plan in accordance with the National Environmental Policy Act (NEPA), and the Assistant Administrator determined that there would be no significant impact on the human environment resulting from the regulations and that preparation of an environmental impact statement was not required by section 102(2)(C) of NEPA or its implementing regulations. The environmental impacts of the proposed 1993 Catch Sharing Plan and alternatives are no different from those evaluated in the 1990 EA and, therefore, this action is categorically excluded from the NEPA requirements to prepare another EA in accordance with NOAA Administrative Order 216–6, section 6.02a.3. This action does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under Executive Order 12612. Copies of the 1990 environmental assessment and the 1992 regulatory impact review are available (see **ADDRESSES**). This action has been determined to be consistent to the maximum extent practicable with applicable state coastal management programs and has been submitted for review by the responsible state agencies under section 307 of the Coastal Zone Management Act.

List of Subjects in 50 CFR Part 301

Fisheries, Treaties.

Dated: February 12, 1993.

Samuel W. McKeen,

Program Management Officer.

For the reasons set out in the preamble, 50 CFR part 301 is proposed to be amended as follows:

PART 301—PACIFIC HALIBUT FISHERIES

1. The authority citation for part 301 continues to read as follows:

Authority: 5 U.S.T. 5; T.I.A.S. 2900; 16 U.S.C. 773–773k.

2. In § 301.20, paragraphs (d) through (k) are removed, paragraphs (l) through (t) are redesignated (e) through (m), and a new paragraph (d) is added to read as follows:

§ 301.20 Sport fishing for halibut.

* * * * *

(d) Area 2A sport fisheries.

(1) Area 2A sport catch limits. [Reserved for International Pacific Halibut Commission]

(2) Area 2A seasons and bag limits are as follows except as modified under the inseason actions in paragraph (d)(3) of this section.

(i) In Puget Sound and the U.S. waters in the Strait of Juan de Fuca, east of a line from Bonilla Point (latitude 48°35′44″ N., longitude 124°43′00″ W.) to Tatoosh Island (latitude 48°23′30″ N., longitude 124°44′00″ W.) to Cape Flattery (latitude 48°22′55″ N., longitude 124°43′42″ W.), there is no sub-quota. The daily bag limit is two halibut of any size per day per person. The fishing season is May 10 through July 17, 6 days a week (closed Wednesdays).

(ii) In the area off the north Washington coast, west of the line described in paragraph (d)(2)(i) of this section and north of the Queets River (latitude 47°31′42″ N.), the sub-quota is 85,507 pounds (38.8 mt). The daily bag limit is one halibut of any size per day per person and the sport fishing seasons are:

(A) May 1 through July 1, 7 days a week, or until 72,681 pounds (33.0 mt) are estimated to have been taken and the season is closed by the Commission; and

(B) July 2 through September 30, 2 days a week (Friday and Saturday), or until the area sub-quota of 85,507 pounds (38.8 mt) is estimated to have been taken and the season is closed by the Commission, whichever occurs first.

(iii) In the area between the Queets River, Washington, and Cape Falcon, Oregon (latitude 45°46′00″ N.), the sub-quota is 7,137 pounds (3.2 mt). The daily bag limit is one halibut of any size per day per person. The fishing season is from May 20 through June 10, 2 days a week (Thursday and Friday). Immediately after the season closes, the Regional Director, in consultation with the affected states and Commission staff, will determine if the sub-quota for this area was taken. If the sub-quota was not taken and sufficient harvest remains for at least 1 day of fishing, the Regional Director will re-open the fishery on July 2 through September 30, 1 day a week (Friday), or until 7,137 pounds (3.2 mt) are estimated to have been taken and the season is closed by the Commission, whichever occurs first.

(iv) In the area off Oregon between Cape Falcon and the California border (latitude 42°00′00″ N.), the sub-quota is 85,469 pounds (38.8 mt). The daily bag limit is two halibut, one with a minimum overall size limit of 23 inches (81.3 centimeters) and the second with a minimum overall size limit of 50 inches (127.0 centimeters). The fishing seasons are:

(A) May 1 through July 11, 7 days a week, between Cape Falcon and Nestucca Bay (latitude 45°09′45″ N), or until 2,564 pounds (1.2 mt) are estimated to have been taken and the season is closed by the Commission, whichever occurs first;

(B) May 1 through July 11, 5 days a week (Wednesday through Sunday), between Nestucca Bay and the California border, or until 65,811 pounds (29.9 mt) are estimated to have been taken and the season is closed by the Commission, whichever occurs first;

(C) July 12 through August 3, 7 days a week, in the area inside the 30-fathom curve nearest to the coastline as plotted on National Ocean Service charts numbered 18520, 18580, and 18600 from Cape Falcon to the California border, or until 2,564 pounds (1.2 mt) are estimated to have been taken (except that any poundage remaining unharvested after the earlier seasons will be added to this season) and the season is closed by the Commission, whichever is earlier; and

(D) August 4 through September 30, 5 days a week (Wednesday through Sunday), from Cape Falcon to the California border, or until a total of 85,469 pounds (38.8 mt) for this area are estimated to have been taken and the season is closed by the Commission, whichever is earlier.

(v) In the area off the California coast, there is no sub-quota. The daily bag limit is one halibut with a minimum overall size limit of 32 inches (81.3 centimeters). The fishing season in this area is May 1 through September 30, 7 days a week.

(3) Flexible inseason management provisions in Area 2A.

(i) The Regional Director, after consultation with the Chairman of the Pacific Fishery Management Council, the Commission Executive Director, and the Fisheries Director(s) of the affected state(s), is authorized to modify regulations during the season after determining that such action:

(A) is necessary to allow allocation objectives to be met; and

(B) will not result in exceeding the catch limit established preseason for each area.

(ii) Flexible inseason management provisions include, but are not limited to, the following:

(A) Modification of sport fishing periods;

(B) Modification of sport fishing bag limits;

(C) Modification of sport fishing size limits; and

(D) Modification of sport fishing days per calendar week.

(iii) Notice procedures.

(A) Actions taken under paragraph (d)(3) of this section will be published in the **Federal Register**.

(B) Actual notice of inseason management actions will be provided by a telephone hotline administered by the Northwest Region, NMFS, 206–526–6667 or 800–662–9825 (May through September) and by U.S. Coast Guard broadcasts. These broadcasts are announced on Channel 16 VHF–FM and 2182 KHz at frequent intervals. The announcements designate the channel or frequency over which the Notice to Mariners will be immediately broadcast Since provisions of these regulations may be altered by inseason actions, sport fishermen should monitor either the telephone hotline or Coast Guard broadcasts for current information for the area in which they are fishing.

(iv) Effective dates.

(A) Any action issued under paragraph (d)(3)(iii) of this section is effective on the date specified in the publication or at the time that the action is filed for public inspection with the Office of the Federal Register, whichever is later.

(B) If time allows, NMFS will invite public comment prior to the effective date of any inseason action filed with the **Federal Register**. If the Regional Director determines, for good cause, that an inseason action must be filed without affording a prior opportunity for public comment, public comments will be received for a period of 15 days after the filing of the action with the **Federal Register**.

(C) Any inseason action issued under paragraph (c)(3) of this section will remain in effect until the stated expiration date or until rescinded, modified, or superseded. However, no inseason action has any effect beyond the end of the calendar year in which it is issued.

(v) Availability of data. The Regional Director will compile in aggregate form all data and other information relevant to the action being taken and will make them available for public review during normal office hours at the Northwest Regional Office, NMFS, Fisheries Management Division, 7600 Sand Point Way NE., Seattle, Washington.

(4) When the Commission has determined that a sub-quota under paragraph (d)(2) of this section is estimated to have been taken and announced a date on which the season will close, no person shall sport fish for halibut in that area after that date for the rest of the year, unless a reopening of that area for sport halibut fishing is scheduled under paragraph (d)(2) or (d)(3) of this section, or announced by the Commission.

* * * * *

[FR Doc. 93–3871 Filed 2–16–93; 12:34 pm]

BILLING CODE 3510-22-M

Notices

Federal Register
Vol. 58, No. 32
Friday, February 19, 1993

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Forms Under Review by Office of Management and Budget

February 12, 1993.

The Department of Agriculture has submitted to OMB for review the following proposal for the collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35) since the last list was published. This list is grouped into new proposals, revisions, extension, or reinstatements. Each entry contains the following information:

(1) Agency proposing the information collection; (2) Title of the information collection; (3) Form number(s), if applicable; (4) How often the information is requested; (5) Who will be required or asked to report; (6) An estimate of the number of responses; (7) An estimate of the total number of hours needed to provide the information; (8) Name and telephone number of the agency contact person.

Questions about the items in the listing should be directed to the agency person named at the end of each entry. Copies of the proposed forms and supporting documents may be obtained from: Department Clearance Officer, USDA, OIRM, room 404–W Admin. Bldg., Washington, DC 20250, (202) 690–2118.

Revision (Emergency)

- Agricultural Stabilization and Conservation Service 7 CFR 1413, 1477, and 1478—Disaster Payments and Disaster Assistance Program

CCC–441, 441A, 441W, 441 Income, 440, ASCS–574, 574–1, 658, 441WR, 441SU

On occasion

Farms; 16,318,003 responses; 4,079,501 hours

Diane Sharp (202) 720–4667

New Collection (Emergency)

- Farmers Home Administration

Survey of Labor Housing Borrowers

One-time only

Individuals or households; Non-profit institutions; Small businesses or organizations; 1,000 responses; 1,500 hours

Jack Holston (202) 720–9736

- Food And Nutrition Service

Evaluation of the Expanded EBT Demonstration in Maryland

On occasion

Individuals or households, State or local governments, Businesses or other for-profit, Federal agencies or employees, Small businesses or organizations, 29,938 responses; 4,932 hours

Margaret Andrews (703) 305–2115

Larry K. Roberson,

Deputy Department Clearance Officer.

[FR Doc. 93–3944 Filed 2–18–93; 8:45 am]

BILLING CODE 3410-01-M

Forest Service

Monache Off-Highway Vehicle Plan

AGENCY: Forest Service, USDA.

ACTION: Cancellation notice.

SUMMARY: The Forest Service has cancelled its proposal to prepare a single off-highway vehicle (OHV) plan for the Monache area on the Mt. Whitney Ranger District, Inyo National Forest, Tulare County, California. The preparation of an environmental impact statement for this proposal is cancelled. The Monache proposal is being combined with the ongoing effort to prepare the Interagency Motor Vehicle Use Plan covering National Forest and Public lands in the eastern Sierra Nevada.

The Notice of Intent, published in the **Federal Register** on December 28, 1990 is hereby rescinded (55 FR 53318).

FOR FURTHER INFORMATION CONTACT:

Direct questions about this cancellation to Bill Bramlette, Recreation Staff Officer, Inyo National Forest, 873 North Main Street, Bishop, CA 93514–2494, phone 619–873–2400.

Dated: February 12, 1993.

Dennis W. Martin,

Forest Supervisor.

[FR Doc. 93–3915 Filed 2–18–93; 8:45 am]

BILLING CODE 3410-11-M

Soil Conservation Service

South East Middle Suwannee River Area Watershed, Suwannee County, FL; Finding of No Significant Impact

AGENCY: Soil Conservation Service, USDA.

ACTION: Notice of a Finding of no significant impact.

SUMMARY: Pursuant to section 102(2)(C) of the National Environment Policy Act of 1969; the Council on Environmental Quality Guidelines (40 CFR part 1500); the Soil Conservation Service Guidelines (7 CFR part 650); the Soil Conservation Service, U.S. Department of Agriculture gives notice that an environmental impact statement is not being prepared for the South East Middle Suwannee River Area Watershed, Suwannee County, Florida.

FOR FURTHER INFORMATION CONTACT: T. Niles Glasgow, State Conservationist, Soil Conservation Service, Federal Building, 401 SE First Ave., room 248, Gainesville, Florida 32601; Telephone: 904–377–0946.

SUPPLEMENTARY INFORMATION: The environmental assessment of this federally assisted action, developed by the Soil Conservation Service, indicates that the project will not cause significant local, regional, or national impacts on the environment.

As a result of these findings, T. Niles Glasgow, State Conservationist, has determined that the preparation and review of an environmental impact statement is not needed for this project.

The project concerns a plan to relieve threats to human health and contamination of ground and surface waters by nitrate leaching from intensive agricultural operations. The planned works of improvement consist of agricultural Best Management Practices to safely collect, store, transport and utilize agricultural waste.

This Notice of A Finding of No Significant Impact (FONSI) has been forwarded to the Environmental Protection Agency and to various Federal, State and local agencies and interested parties. A limited number of copies of the FONSI are available to fill single copy requests at the above address. Basic data developed for the environmental assessment are on file and may be reviewed by contacting T. Niles Glasgow.

No administrative action on implementation of the proposal will be taken until 30 days after the date of this publication in the **Federal Register**.

(This activity is listed in the Catalog of Federal Domestic Assistance under No. 10.904—Watershed Protection and Flood Prevention—and is subject to the provisions of Executive Order 12372 which requires intergovernmental consultation with State and local Officials.)

Dated: February 12, 1993.

T. Niles Glagow,

State Conservationist.

[FR Doc. 93–3911 Filed 2–18–93; 8:45 am]

BILLING CODE 3410-16-M

COMMISSION ON CIVIL RIGHTS

Agenda and Public Meeting of the North Carolina State Advisory Committee

Notice is hereby given, pursuant to the provisions of the Rules and Regulations of the U.S. Commission on Civil Rights, that a meeting of the North Carolina State Advisory Committee to the Commission will convene at 12 p.m. and adjourn at 5 p.m. on Wednesday, March 10, 1993, at the Wake Forest University, Benson Center, room 401B, Winston-Salem, North Carolina. The purpose of this meeting is: (1) To discuss the status of the Commission; (2) to hear reports on civil rights progress and/or problems in the State; (3) to discuss the current project on racial tensions in North Carolina with mayors from several key NC cities; and, (4) to discuss racial tensions in Winston-Salem with community leaders.

Persons desiring additional information, or planning a presentation to the Committee should contact North Carolina Acting Chairperson, Asa Spaulding, Jr. at 919/469–9099 or Bobby D. Doctor, Regional Director, Southern Regional Office of the U.S. Commission on Civil Rights at (404/730–2476, TDD 404/730–2481). Hearing impaired persons who will attend the meeting and require the services of a sign language interpreter should contact the Southern Regional Office at least five (5) working days before the scheduled date of the meeting.

The meeting will be conducted pursuant to the provisions of the rules and regulations of the Commission.

Dated at Washington, DC, February 11, 1993.

Carol-Lee Hurley,

Regional Programs Coordination Unit.

[FR Doc. 93–3912 Filed 2–18–93; 8:45 am]

BILLING CODE 6335-01-M

Agenda and Public Meeting of the North Dakota Advisory Committee

Notice is hereby given, pursuant to the provisions of the rules and regulations of the U.S. Commission on Civil Rights, that a meeting of the North Dakota Advisory Committee to the Commission will be held from 10 a.m. until 1 p.m. on Wednesday, March 10, 1993, at the Radisson Inn, 800 S. Third St., in Bismarck. The purpose of this meeting is to brief Advisory Committee members on Commission and regional activities, discuss current civil rights issues, and plan for future activities.

Persons desiring additional information should contact Acting Committee Chairperson Betty L. Mills or William F. Muldrow, Director of the Rocky Mountain Regional Office, 303–866–1040 (TDD 303–866–1049). Hearing-impaired persons who will attend the meeting and require the services of a sign language interpreter should contact the Regional Office at least five (5) working days before the scheduled date of the meeting.

The meeting will be conducted pursuant to the provisions of the rules and regulations of the Commission.

Dated at Washington, DC, February 11, 1993.

Carol-Lee Hurley,

Chief, Regional Programs Coordination Unit.

[FR Doc. 93–3913 Filed 2–18–93; 8:45 am]

BILLING CODE 6335-01-M

DEPARTMENT OF COMMERCE

Bureau of Export Administration

Electronics Technical Advisory Committee; Notice of Closed Meeting

A meeting of the Electronics Technical Advisory Committee will be held March 5, 1993, at 9 a.m., in the Herbert C. Hoover Building, room 1617M–2, 14th Street and Pennsylvania Avenue, NW., Washington, DC. The Committee advises the Office of Technology and Policy Analysis with respect to technical questions which affect the level of export controls applicable to electronics and related equipment or technology. The Committee will meet only in Executive Session to discuss matters properly classified under Executive Order 12356, dealing with the U.S. and COCOM control program and strategic criteria related thereto.

The Assistant Secretary for Administration, with the concurrence of the delegate of the General Counsel, formally determined on February 5, 1992, pursuant to section 10(d) of the Federal Advisory Committee Act, as amended, that the series of meetings or portions of meetings of the Committee and of any Subcommittees thereof, dealing with the classified materials listed in 5 U.S.C. 552b(c)(1) shall be exempt from the provisions relating to public meetings found in section 10 (a)(1) and (a)(3), of the Federal Advisory Committee Act. The remaining series of meetings or portions thereof will be open to the public.

A copy of the Notice of Determination to close meetings or portions of meetings of the Committee is available for public inspection and copying in the Central Reference and Records Inspection Facility, room 6628, U.S. Department of Commerce, Washington, DC. For further information, call 202–482–4959.

Dated: February 12, 1993.

Lee Ann Carpenter,

Acting Director, Technical Advisory Committee Unit.

[FR Doc. 93–3877 Filed 2–18–93; 8:45 am]

BILLING CODE 3510-DT-M

Economics and Statistics Administration

Advisory Committee of the Task Force for Designing the Year 2000; Census and Census-Related Activities for 2000–2009

AGENCY: Economics and Statistics Administration, Department of Commerce.

ACTION: Notice of public meeting.

SUMMARY: Pursuant to the Federal Advisory Committee Act (Pub. L. 92–463, as amended by Public Law 94–409) we are giving notice of a meeting of the Advisory Committee of the Task Force for Designing the Year 2000 Census and Census-Related Activities for 2000–2009. The meeting will convene on Friday, March 5, 1993, at the Bureau of Census, room 1630, Federal Building 3, Suitland, Maryland.

The Advisory Committee is composed of a Chairperson, twenty-five member organizations, and eight ex officio members, all appointed by the Secretary of Commerce. The Advisory Committee will consider the goals of the census and user needs for information provided by the census, and provide a perspective from the standpoint of the outside user community on how proposed designs for the year 2000 Census realize those goals and satisfy those needs. The Advisory Committee shall consider all aspects of the conduct of the census of population and housing for the year

2000, and shall make recommendations for improving that census.

DATES: The meeting will begin at 9:30 a.m. and adjourn at 4:30 p.m. on Friday, March 5, 1993.

ADDRESSES: The meeting will take place at the Bureau of Census, room 1630, Federal Building 3, Suitland, Maryland.

FOR FURTHER INFORMATION CONTACT: Persons wishing additional information regarding this meeting, or who wish to submit written statements or questions, may contact Thomas P. DeCair, Department of Commerce, Bureau of the Census, Room 2066, Federal Building 3, Washington, DC 20233. Telephone: (301) 763–7298.

SUPPLEMENTARY INFORMATION: The agenda for the meeting includes continuing consideration of a final set of potential designs for the 2000 census, a presentation on the Barriers to Enumeration, a Summary of Ethnographic Studies, and other items that the Chair and Advisory Committee members deem appropriate for this meeting. The meeting is open to the public. A brief period will be set aside for public comment and questions. However, persons with extensive questions or statements for the record must submit them in writing to the Commerce Department official named below at least three working days prior to the meeting.

The meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Susan Knight on (301) 763–7298.

Dated: February 10, 1993.

Jeffrey Mayer,

Acting Under Secretary for Economic Affairs, Economics and Statistics Administration.

International Trade Administration

[A–412–812]

Notice of Final Determination of Sales at Less Than Fair Value: New Steel Rail, Except Light Rail, From the United Kingdom

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

EFFECTIVE DATE: February 18, 1993.

FOR FURTHER INFORMATION CONTACT: Michelle Frederick or Erik Warga, Office of Antidumping Investigations, Import Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone (202) 482–0186 or 482–0922, respectively.

FINAL DETERMINATION: We determine that imports of new steel rail, except light rail, (steel rail) from the United Kingdom are being, or are likely to be, sold in the United States at less than fair value (LTFV), as provided in section 735 of the Tariff Act of 1930, as amended (the Act). The estimated margins are shown in the "Suspension of Liquidation" section of this notice.

Case History

Since our October 8, 1992, preliminary determination (57 FR 47450, October 16, 1992), the following events have occurred:

On November 12, 1992, we published a notice postponing our final determination until February 10, 1992 (57 FR 53692).

We conducted verification of respondent's (British Steel plc's) questionnaire response from October 19 through October 21, 1992, (at the Workington, Cumbria, United Kingdom, offices of British Steel Track Products) and on October 30, 1992 (at the Schaumburg, Illinois, offices of British Steel Inc.).

Petitioners, Bethlehem Steel Corporation and CF&I Steel Corporation, and respondent requested a public hearing on October 22 and October 26, 1992, respectively. Both parties subsequently withdrew their hearing requests on November 10 (respondent) and November 23, 1992 (petitioners).

Petitioners and respondent filed case briefs on November 23, 1992, and rebuttal briefs on November 25, 1992.

Scope of Investigation

The merchandise subject to this investigation is new steel rail, except light rail and girder rail, of other than alloy steel, and over 30 kilograms per meter. Standard and premium carbon steel T rail, crane rail and contact rail (electrical rail) covered by the scope of this investigation are currently classifiable under the following Harmonized Tariff Schedule of the United States (HTSUS) subheadings: 7302.10.1010, 7302.10.1015, 7302.10.1035, 7302.10.1045, and 8548.00.0000. Although the HTSUS subheadings are provided for convenience and customs purposes, our written description of the scope of this investigation is dispositive.

Period of Investigation

The period of investigation (POI) is December 1, 1991, through May 31, 1992.

Such or Similar Comparisons

We based our such or similar comparisons on the same methodology described in the preliminary determination.

Fair Value Comparisons

To determine whether British Steel made sales of steel rail from the United Kingdom in the United States at less than fair value, we compared the United States price (USP) to the foreign market value (FMV), as specified in the "United States Price" and "Foreign Market Value" sections of this notice.

United States Price

We calculated USP using the methodology described in the preliminary determination, with the following exceptions: cargo superintendent charges, deadfreight, demurrage, and ocean freight were revised for certain sales based on verification findings (see *Comment 4* in the "Interested Party Comments" section of this notice); the amount reported as foreign dunnage was not deducted because it was found to be already included in another reported charge amount (see *Comment 5* in the "Interested Party Comments" section of this notice).

Foreign Market Value

We calculated FMV using the methodology described in the preliminary determination, with the following exceptions: we recalculated credit based on verification findings for purposes of making a circumstance-of-sale adjustment pursuant to 19 CFR 353.56, for differences in credit expenses. In addition, at verification, respondent did not adequately support the figure reported for purposes of adjusting for physical differences in merchandise. As a result, the issue of how to make this adjustment was resolved by using best information available.

Currency Conversion

We made currency conversions based on the official exchange rates in effect on the dates of the U.S. sales as certified by the Federal Reserve Bank.

Verification

As provided in section 776(b) of the Act, we verified information provided by the respondent by using standard verification procedures, including examination of relevant sales and financial records, as well as relevant original documentation that supported information provided in the questionnaire response.

Interested Party Comments

Comment 1

Respondent argues that the Department of Commerce (the Department) did not select the proper

home market (HM) model as the most similar merchandise to the one model sold in the U.S. during the POI. Respondent specifically contends that its proposed match is the most appropriate based on profile (the outline of a rail's cross-section) and end use. Even though the profiles of all three products (the U.S. model, the HM model match selected by the Department, and respondent's proposed HM model match) are "symmetric," respondent contends that the Department did not give enough weight to web thickness. Respondent further contends that the HM model match selected by the Department is specially produced for reprocessing into switch and crossing rail and thus is an inappropriate match to the U.S. model, which is used as standard running rail. Finally, respondent contends that size is less important a criterion than profile, and that its proposed model match is more comparable based on length and quantity sold.

Petitioners contend that comparisons of rails with different profiles are possible. They also suggest that respondent's definition of use is too narrow, and that the Department has in practice determined products to be comparable "where component materials and general uses are similar * * *" (See, e.g., Tapered Roller Bearings, Finished and Unfinished, and Parts Thereof from Japan, (56 FR 41508, 1991) (Final Results of Administrative Review).) Petitioners also argue that there is no statutory basis for including quantity sold as a matching criterion. Given the hierarchy that the Department has used, the preliminary determination matching methodology should not change.

DOC Position

We disagree with respondent, and we have not revised our matching criteria or our selection of similar merchandise.

For our preliminary determination, we revised the matching criteria to include profile because respondent argued that profile, which it defined as symmetric or asymmetric, was an important characteristic of rail. Respondent now implies that web thickness also should be considered in selecting similar merchandise. Respondent did not provide web thickness (or any other characteristic distinguishing among symmetric profiles) in either its product matching concordance or its sales listings. Thus, even if we were to consider web thickness as an additional matching criterion, we would be unable to determine which home market model or models would be most similar to the U.S. model.

With respect to respondent's argument that the model match it proposes is more similar to the U.S. model based on length, respondent fails to recognize that size, which precedes length in our matching hierarchy, was the basis for our selection in this instance. Thus, the comparability of other models based on less important criteria will not alter the model match selection.

Finally, end use and quantity sold are not factors considered in determining appropriate product matches within a such or similar category.

Comment 2

Respondent contends that a quantity adjustment should be made, as provided for under 19 CFR 353.55, in the event that the Department rejects respondent's argument that selection of an alternate home market model match is appropriate. The appropriate adjustment is the amount that sales documentation examined at verification listed as a quantity extra for a sale of the model match used in the preliminary determination.

Respondent contends that it is the general industry practice to charge quantity extras, noting that respondent's price list, submitted with its questionnaire response, lists quantity extras. Respondent also notes that rail producers in other countries charge quantity extras. Respondent further contends that standard cost data examined at verification (to support reported information on adjustments for similar merchandise) demonstrate that the quantity extra amount approximately represents the additional per-unit costs associated with producing the quantity actually sold instead of a "standard" quantity.

Petitioners counter that respondent has not satisfied the regulatory requirements for such an adjustment, and that respondent's claim for such an adjustment should in any case be rejected as untimely since it was first made after verification.

DOC Position

We agree with petitioners. Because respondent first requested a quantity adjustment in its case brief, well after verification, the Department was not able to examine supporting facts in the context of a verification.

Further, respondent's argument is inadequate when examined on its merits. Under 19 CFR 353.55, an adjustment for differences in quantity will be made if respondent shows that "the amount of any price differential is wholly or partly due to that difference in quantities." If the Department decides an adjustment is appropriate, it will consider, among other things, respondent's normal quantity discount policy in determining how to quantify any adjustment.

Respondent has not demonstrated adequately that a price differential exists (*see* December 22, 1992, concurrence memorandum). Further, assuming that a price differential had been adequately demonstrated, respondent has not satisfied either of the criteria set forth in 19 CFR 353.55(b). That section permits a quantity adjustment when respondent demonstrates a consistent pricing practice in the home market (*i.e.*, the granting of quantity discounts of at least the same magnitude on 20 percent or more of sales within the such or similar category) or when cost differentials directly associated with the different quantities are clearly demonstrated. Respondent has not made an adequate showing as to either criterion.

Comment 3

Petitioners contend that section 772(d)(1)(C) of the Act calls for the Department to apply the same value-added-tax (VAT) percentage to the home market price and the U.S. price, not the same VAT amount. Petitioners cite, *inter alia*, *Zenith Electronics Corp.* v. *United States*, 633 F. Supp. 1382, 1389 (CIT 1986) (*"Zenith I"*); and *Zenith Electronics Corp.* v. *United States*, 14 CIT _____, 755 F. Supp. 397, 405–406 (1990) (*"Zenith II"*). Petitioners further contend that the VAT amount added to USP should be based on a USP that is net of all "appropriate adjustments" (*e.g.*, selling expenses and movement charges).

Respondent counters that it is the Department's policy to add the same absolute VAT adjustment to both the home market and U.S. prices, and that similar arguments by petitioners have been rejected in numerous other recently issued determinations. With respect to the appropriate VAT base, respondent notes that the Department calculated hypothetical U.S. VAT correctly inasmuch as VAT in the United Kingdom is applied to price charged to the customer.

DOC Position

We agree with respondent. We do not agree with the Court of International Trade's (CIT's) decision in *Zenith II* concerning the circumstance-of-sale adjustment (COS) and further note again that none of the *Zenith* decisions is binding upon the Department in this proceeding. Significantly, the rationale

underlying these decisions conflicts with a binding Federal Circuit precedent and a recent CIT decision. *See Smith-Corona Group* v. *United States*, 713 F.2d 1568 (Fed. Cir. 1983) (*"Smith-Corona"*) (COS deduction of indirect selling expenses from foreign market value to achieve an "apples to apples" comparison upheld); *see also Budd Co.* v. *United States*, Slip Op. 90–85 (CIT 1990) (COS adjustment made to correct artificial distortion to foreign currency upheld).

Furthermore, the statute, as implemented by the regulation, provides that the Department "shall" make "due allowance" for any price difference between foreign market value and United States price that is "wholly or partly due to" circumstances of sale that are directly related to the sale of the subject merchandise (section 773(a)(4)(B) of the Act; 19 CFR 353.56 (1992)). The price difference between the foreign market value and the United States price of the subject merchandise is "partly due" to differences in taxation: only home market merchandise is subject to U.K. VAT.

Because the VAT COS adjustment comports with the statutory and regulatory requirements, the statute mandates that the Department make the adjustment. Failure to do so, when adding to the United States price the hypothetical VAT forgiven on exportation, would have artificially inflated the respondent's dumping margins. Such a result would have conflicted not only with a binding Federal Circuit precedent (*i.e.*, the *Smith-Corona* case cited above), but also with congressional intent and the General Agreement on Tariffs and Trade (GATT).

We therefore have not changed our preliminary determination methodology, and have followed our normal and longstanding practices of basing hypothetical U.S. VAT on the price to which it would be applied in the home market and accounting for VAT differences through a circumstance-of-sale adjustment.

Comment 4

Respondent contends that, where appropriate, the Department should revise the U.S. sales listing to reflect amounts paid to unrelated parties for movement charges rather than the reported figures. The reported movement charges were the amounts paid to a related party.

DOC Position

Normally, we will make corrections to the sales listings for minor discrepancies found at verification. For the U.S. sales selected for examination at verification, we noted that certain charges were actually less than the figures reported. We have therefore revised reported figures to reflect any different actual figures found during verification only for those sales that were selected for examination. For those U.S. sales not examined at verification, we have made no adjustment since the sales examined supported respondent's contention that payments to a related party for movement charges were arm's length transactions.

Comment 5

Respondent contends that the amount reported as foreign dunnage for U.S. sales was included in another reported movement charge and thus should not be deducted from U.S. price.

Petitioners counter that there are no grounds for granting respondent's request.

DOC Position

We agree with respondent. Since we verified that foreign dunnage was included in an amount reported for other movement charges, we have not deducted the amount reported under the foreign dunnage field.

Suspension of Liquidation

In accordance with section 733(d) of the Act, we are directing the Customs Service to continue to suspend liquidation of all entries of steel rail from the United Kingdom that are entered, or withdrawn from warehouse, for consumption on or after October 16, 1992, the date of publication in the **Federal Register** of our preliminary determination. The Customs Service shall require a cash deposit or posting of a bond equal to the estimated margins, as shown below. The suspension of liquidation will remain in effect until further notice. The weighted-average margins are as follows:

Manufacturer/producer/exporter	Weighted-average margin percentage
British Steel plc	69.20
All others	69.20

ITC Notification

In accordance with section 735(d) of the Act, we have notified the ITC of our determination. The ITC will now determine whether these imports are materially injuring, or threaten material injury to, the U.S. industry within 45 days. If the ITC determines that material injury, or threat of material injury, does not exist with respect to the steel rail, the proceeding will be terminated and all securities posted will be refunded or cancelled. If the ITC determines that such injury does exist, the Department will issue an antidumping duty order directing Customs officials to assess antidumping duties on all imports of steel rail from the United Kingdom entered, or withdrawn from warehouse, for consumption on or after the effective date of the suspension of liquidation.

Notice to Interested Parties

This notice also serves as the only reminder to parties subject to administrative protective order (APO) of their responsibility, pursuant to 19 CFR 353.34(d), concerning the return or destruction of proprietary information disclosed under APO. Failure to comply is a violation of the APO.

This determination is published pursuant to section 735(d) of the Act (19 U.S.C. 1673d(d)) and 19 CFR 353.20(a)(4).

Dated: February 10, 1993.

Joseph A. Spetrini,

Acting Assistant Secretary for Import Administration.

[FR Doc. 93–3817 Filed 2–18–93; 8:45 am]

BILLING CODE 3510-DS-M

Minority Business Development Agency

Business Development Center Applications: California IBDC

AGENCY: Minority Business Development Agency, Commerce.

ACTION: Notice.

SUMMARY: In accordance with Executive Order 11625, the Minority Business Development Agency (MBDA) is soliciting competitive applications under its American Indian Program to operate an Indian Business Development Center (IBDC) for approximately a 3-year period, subject to Agency priorities, recipient performance, and the availability of funds. The cost of performance for the first budget period (12 months) is estimated at $310,575 in Federal funds. The Federal funds consist of a base amount of $303,000 and a $7,575 allowance for an audit fee. The period of performance will be from June 1, 1993 to May 31, 1994. The IBDC will operate in the California Geographic Service Area.

The award number for this IBDC will be 09–10–93002–01.

The funding instrument for the IBDC will be a cooperative agreement. Competition is open to individuals, non-profit and for-profit organizations,

state and local governments, American Indian Tribes and educational institutions.

The American Indian program is designed to provide business development services to the American Indian business community for the establishment and operation of viable American Indian businesses. To this end, MBDA funds organizations that can identify and coordinate public and private sector resources on behalf of American Indian individuals and firms; offer a full range of management and technical assistance; and serve as a conduit of information and assistance regarding American Indian business.

Applications will be evaluated initially by regional staff on the following criteria: The experience and capabilities of the firm and its staff in addressing the needs of the business community in general and, specifically, the special needs of American Indian businesses, individuals and organizations (50 points); the resources available to the firm in providing business development services (10 points); the firm's approach (techniques and methodologies) to performing the work requirements included in the application (20 points); and the firm's estimated cost for providing such assistance (20 points). An application must receive at 70% of the points assigned by one evaluation criteria category to be considered programmatically acceptable and responsive. The selection of an application for further processing by MBDA will be made by the Director based on a determination of the application most likely to further the purpose of the American Indian program. The application will then be forwarded to the Department for final processing and approval, if appropriate. The Director will consider past performance of the applicant on previous Federal awards.

IBDCs performing satisfactorily may continue to operate after the initial competitive year for up to 2 additional budget periods. IBDCs with year-to-date "commendable" and "excellent" performance ratings may continue to be funded for up to 3 or 4 additional budget periods, respectively. Under no circumstances shall an IBDC be funded for more than 5 consecutive budget periods without competition. Periodic reviews culminating in year-to-date quantitative and qualitative evaluations will be conducted to determine if funding for the project should continue. Continued funding will be at the discretion of MBDA based on such factors as an IBDC's performance, the availability of funds and Agency priorities.

Awards under this program shall be subject to all Federal and Departmental regulations, policies, and procedures applicable to Federal assistance awards.

In accordance with OMB Circular A–129, "Managing Federal Credit Programs," applicants who have an outstanding account receivable with the Federal Government may not be considered for funding until these debts have been paid or arrangements satisfactory to the Department of Commerce are made to pay the debt.

Applicants are subject to Governmentwide Debarment and Suspension (Nonprocurement) requirements as stated in 15 CFR part 26.

The Departmental Grants Officer may terminate any grant/cooperative agreement in whole or in part at any time before the date of completion whenever it is determined that the IBDC has failed to comply with the conditions of the grant/cooperative agreement. Examples of some of the conditions which can cause termination are unsatisfactory performance of IBDC work requirements; and reporting inaccurate or inflated claims of client assistance or client certification. Such inaccurate or inflated claims may be deemed illegal and punishable by law. False information on the application can be grounds for denying or terminating funding.

On November 18, 1988, Congress enacted the Drug-Free Workplace Act of 1988 (Pub. L. 100–690, title V, subtitle D). The statute requires contractors and grantees of Federal agencies to certify that they will provide a drug-free workplace. Pursuant to these requirements, the applicable certification form must be completed by each applicant as a precondition for receiving Federal grant or cooperative agreement awards.

15 CFR part 28 is applicable and prohibits recipients of Federal contracts, grants, and cooperative agreements from using appropriated funds for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a specific contract, grant, or cooperative agreement. Form CD–511, "Certifications Regarding Debarment, Suspension and Other Responsibility Matters; Drug-Free Workplace Requirements and Lobbying" and, when applicable, the SF–LLL, "Disclosure of Lobbying Activities," are required.

CLOSING DATE: The closing date for submitting an application is March 3, 1993. Applications must be postmarked on or before March 3, 1993.

Proposals will be reviewed by the San Francisco Regional Office. The mailing address for submission is: San Francisco Regional Office, Minority Business Development Agency, U.S. Department of Commerce, 221 Main Street, room 1280, San Francisco, California 94105, 415/744–3001.

A pre-application conference to assist all interested applicants will be held at the following address and time: San Francisco Regional Office, Minority Business Development Agency, U.S. Department of Commerce, 221 Main Street, room 1280, San Francisco, California 94105, February 10, 1993 at 10 a.m.

FOR FURTHER INFORMATION CONTACT: Xavier Mena, Regional Director San Francisco Regional Office at 415/744–3001.

SUPPLEMENTARY INFORMATION: Anticipated processing time of this award is 120 days. Executive Order 12372, "Intergovernmental Review of Federal Programs," is not applicable to this program. Questions concerning the preceding information, copies of application kits and applicable regulations can be obtained from the San Francisco Regional Office.

11.801 American Indian Program
(Catalog of Federal Domestic Assistance)

Dated: January 20, 1993.

Xavier Mena,

Regional Director, San Francisco Regional Office.

[FR Doc. 93–3916 Filed 2–18–93; 8:45 am]
BILLING CODE 3510-21-M

National Oceanic and Atmospheric Administration

Gulf of Mexico Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service, NOAA, Commerce.

The Gulf of Mexico Fishery Management Council's Law Enforcement Advisory Panel (Panel) will meet on March 17, 1993, from 1 p.m. until 5 p.m., at the Brazilian Court Hotel, 301 Australian Avenue, Palm Beach, FL; telephone: (407) 655–7740.

The Panel will review the following: (1) Access limitation enforcement issues; (2) general State/Federal compatibility and enforceability issues; and (3) the Coast Guard Fishery Enforcement study.

For more information contact Steven M. Atran, Gulf of Mexico Fishery Management Council, 5401 West Kennedy Boulevard, suite 331, Tampa, FL; telephone: (813) 228–2815.

Dated: February 12, 1993.

David S. Crestin,

Acting Director, Office of Fisheries Conservation and Management, National Marine Fisheries Service.

[FR Doc. 93–3872 Filed 2–18–93; 8:45 am]

BILLING CODE 3510-22-M

New England Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service, NOAA, Commerce.

The New England Fishery Management Council will hold a public meeting on February 25–26, 1993, at the King's Grant Inn, Route 128 at Trask Lane, Danvers, MA., telephone: 508–774–6800. The meeting will begin at 10 a.m. on February 25 and at 9 a.m. on February 26.

The first day will begin with reports from: The Council Chairman, the Executive Director, the National Marine Fisheries Service, the Regional Director, the Northeast Fisheries Science Center liaison, the Mid-Atlantic Council liaison, and representatives from the Coast Guard, the Fish and Wildlife Service, and the Atlantic States Marine Fisheries Commission. Following the reports, there will be a presentation by the Northeast Fisheries Science Center on the most recent Stock Assessment Workshop held in late January. In the afternoon the Council will discuss the upcoming Magnuson Fisheries Conservation and Management Act reauthorization and possible amendments.

On the second day of the meeting, the Groundfish Committee will report on the preparation of the public hearing document for Amendment #5 to the Multispecies Fishery Management Plan. The Council will then discuss the Conservation Law Foundation's emergency action request to NMFS to conserve overfished cod and haddock stocks in the Northeast. Reports from the Interspecies and the Monkfish Committees will complete the day's agenda.

For more information contact Douglas G. Marshall, Executive Director, New England Fishery Management Council, 5 Broadway, Saugus, MA 01906; telephone: (617) 231–0422.

Dated: February 12, 1993.

David S. Crestin,

Acting Director, Office of Fisheries Conservation and Management, National Marine Fisheries Service.

[FR Doc. 93–3873 Filed 2–18–93; 8:45 am]

BILLING CODE 3510-22-M

THE COMMISSION OF FINE ARTS

1993 National Capital Arts and Cultural Affairs Program

Notice is hereby given that Public Law 99–190, as amended, authorizing the National Capital Arts and Cultural Affairs Program, has been funded for 1993 in the amount of $7,000,000. All requests for information and applications for grants should be addressed to: Charles H. Atherton, Secretary, Commission of Fine Arts, Pension Building, Suite 312, 441 F Street NW., Washington, DC 20001 Phone: 202–504–2200.

Deadline for receipt of submission of grants applications is 19 March 1993.

This program provides grants for general operating support of organizations whose primary purpose is performing, exhibiting, and/or presenting the arts. To be eligible for these grants, organizations must be located in the District of Columbia, must be not-for-profit, non-academic institutions of demonstrated national repute, and must have annual income, exclusive of federal funds, in excess of one million dollars for the current year and for the past three years.

Charles H. Atherton,

Secretary.

[FR Doc. 93–3832 Filed 2–18–93; 8:45 am]

BILLING CODE 6330-01-M

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Amendment of Export Visa Requirements for Certain Cotton, Wool, Man-Made Fiber, Silk Blend and Other Vegetable Fiber Textiles and Textile Products Produced or Manufactured in Bahrain

February 12, 1993.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Issuing a directive to the Commissioner of Customs amending visa requirements to require manufacturer's identification.

EFFECTIVE DATE: April 1, 1993.

FOR FURTHER INFORMATION CONTACT: Jennifer Aldrich, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–4212.

SUPPLEMENTARY INFORMATION:

Authority: Executive Order 11651 of March 3, 1972, as amended; section 204 of the Agricultural Act of 1956, as amended (7 U.S.C. 1854).

The existing export visa arrangement between the Governments of the United States and Bahrain is being amended, for goods produced or manufactured in Bahrain and exported from Bahrain on and after April 1, 1993, to require that the complete name and address of a company actually involved in the manufacturing process of the textile product covered by the visa be provided on the textile visa document.

The name and address of the company should be placed somewhere on the front of the original export visa document, not within the visa stamp. It should be preceded by the label "manufacturer's identification" or "M.I.D." The name is the full name of the company which performs the substantial part of the manufacturing of the product. The address should include the street name or P.O. Box number (if available), and the city and/or province where the manufacturing occurs. In the case of a shipment covered by a single export visa document containing products which are each manufactured by a number of different companies, the name and address of each company involved should be listed on the export visa document. If additional space is needed for listing the name and address of the firms, the back of the export visa document may be used. Responsible officials will make their best efforts to determine the name and address of a firm or firms which best meet the basic criterion of being an actual manufacturer of the product. This information should appear on the export visa document prior to export from Bahrain. However, for goods exported during the period April 1, 1993 through April 30, 1993, the importer may type this required information on the front of the original visa document. For goods exported on or after May 1, 1993 without the M.I.D. on the export visa document, a new visa containing this information must be obtained.

See 57 FR 19113, published on May 4, 1992.

Ronald I. Levin,

Acting Chairman, Committee for the Implementation of Textile Agreements.

Committee for the Implementation of Textile Agreements

February 12, 1993.

Commissioner of Customs,

Department of the Treasury, Washington, DC 20229.

Dear Commissioner: This directive amends, but does not cancel, the directive issued to you on April 29, 1992, by the Chairman, Committee for the Implementation of Textile Agreements. That directive directs you to prohibit entry of certain cotton, wool, man-made fiber, silk blend and other vegetable fiber textiles and textile products,

produced or manufactured in Bahrain which were not properly visaed by the Government of Bahrain.

Effective on April 1, 1993, for goods produced or manufactured in Bahrain and exported from Bahrain on and after April 1, 1993, you are directed to require that the complete name and address of a company actually involved in the manufacturing process of the textile product covered by the visa be placed on the textile visa document. This information shall appear on the export visa document prior to export from Bahrain. However, for goods exported during the period April 1, 1993 through April 30, 1993, the importer may type this required information on the front of the original visa document.

Shipments entered for consumption, or withdrawn from warehouse for consumption according to this directive which are not accompanied by an appropriate export visa which includes the identification of the manufacturer on the visa document shall be denied entry and a new visa containing this information must be obtained.

The Committee for the Implementation of Textile Agreements has determined that this action falls within the foreign affairs exception to the rulemaking provisions of 5 U.S.C. 553(a)(1).

Sincerely,

Ronald I. Levin,

Acting Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 93–3909 Filed 2–18–93; 8:45 am]

BILLING CODE 3510–DR–F

Textile and Apparel Categories With the Harmonized Tariff Schedule of the United States; Changes to the 1993 Correlation

February 12, 1993.

AGENCY: Committee for the Implementation of Textile Agreements (CITA).

ACTION: Changes to the 1993 Correlation.

FOR FURTHER INFORMATION CONTACT: Lori E. Goldberg, International Trade Specialist, Office of Textiles and Apparel, U.S. Department of Commerce, (202) 482–3400.

SUPPLEMENTARY INFORMATION:

The Correlation: Textile and Apparel Categories based on the Harmonized Tariff Schedule of the United States (1993) presents the harmonized tariff numbers under each of the cotton, wool, man-made fiber, silk blend and other vegetable fiber categories used by the United States in monitoring imports of these textile products and in the administration of the bilateral agreement program. In the 1993 Correlation for Category 352, the descriptions for the following HTS numbers should be amended as follows:

HTS number	Description
6107.11.0010	Men's underpants and briefs of cotton fibers, knit
6107.11.0020	Boys' underpants and briefs of cotton fibers, knit

The 1993 Correlation should be amended further to reflect the following administrative changes which were effective on February 1, 1993:

Obsolete number	New number
6201.91.2010 (434)	6201.91.2011 (434)
6201.91.2020 (434)	6201.91.2021 (434)
6201.92.2020 (334)	6201.92.2021 (334)
6201.92.2030 (334)	6201.92.2031 (334)
6201.92.2040 (334)	6201.92.2041 (334)
6201.92.2050 (334)	6201.92.2051 (334)
6201.92.2060 (334)	6201.92.2061 (334)
6201.93.2510 (434)	6201.93.2511 (434)
6201.93.2520 (434)	6201.93.2521 (434)
6201.93.3510 (634)	6201.93.3511 (634)
6201.93.3520 (634)	6201.93.3521 (634)
6201.99.0010 (334)	6201.99.0011 (334)
6201.99.0020 (434)	6201.99.0021 (434)
6201.99.0030 (634)	6201.99.0031 (634)
6201.99.0050 (834)	6201.99.0051 (834)
6201.99.0060 (834)	6201.99.0061 (834)
6202.91.2010 (435)	6202.91.2011 (435)
6202.91.2020 (435)	6202.91.2021 (435)
6202.92.2025 (335)	6202.92.2026 (335)
6202.92.2030 (335)	6202.92.2031 (335)
6202.92.2060 (335)	6202.92.2061 (335)
6202.92.2070 (335)	6202.92.2071 (335)
6202.93.4010 (435)	6202.93.4011 (435)
6202.93.4020 (435)	6202.93.4021 (435)
6202.93.5010 (635)	6202.93.5011 (635)
6202.93.5020 (635)	6202.93.5021 (635)
6202.99.0010 (334)	6202.99.0011 (334)
6202.99.0020 (335)	6202.99.0021 (335)
6202.99.0030 (435)	6202.99.0031 (435)
6202.99.0040 (635)	6202.99.0041 (635)
6202.99.0050 (835)	6209.99.0051 (835)
6202.99.0060 (835)	6209.99.0061 (835)
.....	6211.31.0045—Jackets and jacket-type garments excluded from heading 6201 (434)
6211.31.0050 (459)	6211.31.0051 (459)
.....	6211.32.0075—Jackets and jacket-type garments excluded from heading 6201 (334)
6211.32.0080 (359)	6211.32.0081 (359)
.....	6211.33.0058—Jackets and jacket-type garments excluded from heading 6201 (634)
6211.33.0060 (659)	6211.33.0061 (659)
.....	6211.39.0075—Jackets and jacket-type garments excluded from heading 6202 (834)
6211.39.0080 (859)	6211.39.0081 (859)
.....	6211.41.0055—Jackets and jacket-type garments excluded from heading 6202 (435)
6211.41.0060 (459)	6211.41.0061 (459)
.....	6211.42.0075—Jackets and jacket-type garments excluded from heading 6202 (335)
6211.42.0080 (359)	6211.42.0081 (359)
.....	6211.43.0078—Jackets and jacket-type garments excluded from heading 6202 (635)
6211.43.0090 (659)	6211.43.0091 (659)
.....	6211.49.0085—Jackets and jacket-type garments excluded from heading 6202 (835)
6211.49.0090 (859)	6211.49.0091 (859)

Ronald I. Levin,

Acting Chairman, Committee for the Implementation of Textile Agreements.

[FR Doc. 93–3908 Filed 2–18–93; 8:45 am]

BILLING CODE 3510–DR–F

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Additions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Additions to Procurement List.

SUMMARY: This action adds to the Procurement List services to be furnished by a nonprofit agency employing persons who are blind or have other severe disabilities.

EFFECTIVE DATE: March 22, 1993.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, Crystal Square 3, suite 403, 1735 Jefferson Davis Highway, Arlington, Virginia 22202–3461.

FOR FURTHER INFORMATION CONTACT: Beverly Milkman (703) 603–7740.

SUPPLEMENTARY INFORMATION: On November 6, December 18 and 29, 1992 the Committee for Purchase From People Who Are Blind or Severely Disabled published notice (57 FR 53098, 60176 and 61884) of proposed additions to the Procurement List.

After consideration of the material presented to it concerning the capability of a qualified nonprofit agency to provide the services, fair market price, and the impact of the additions on the current or most recent contractor, the Committee has determined that the services listed below are suitable for procurement by the Federal Government under 41 U.S.C. 46–48c and 41 CFR 51–2.6.

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in any additional reporting, recordkeeping or other compliance requirements for small entities other than the small organizations that will furnish the services to the Government.

2. The action will not have a severe economic impact on current contractors for the services.

3. The action will result in authorizing small entities to furnish the services to the Government.

4. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 46–48c) in connection with the services proposed for addition to the Procurement List.

Accordingly, the following services are hereby added to the Procurement List:

Administrative Services, Marine Corps Systems Command, Quantico, Virginia.
Janitorial/Custodial, Ozark Lake Park, Pool #13 and Lake Dardanelle Area, Ozark, Arkansas.
Janitorial/Custodial, U.S. Army Reserve Center, 1001 & 1005 Lakecrest Drive, Grand Prairie, Texas.
Laundry Service, Military Entrance Processing Station, 1222 Spruce Street, St. Louis, Missouri.
Mailroom Operation, U.S. Army Engineer District, Prytania Street and Leake Avenue, New Orleans, Louisiana.

This action does not affect contracts awarded prior to the effective date of this addition or options exercised under those contracts.

Beverly L. Milkman,

Executive Director.

[FR Doc. 93–3887 Filed 2–18–93; 8:45 am]

BILLING CODE 6820-33-M

Procurement List; Proposed Additions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Proposed additions to Procurement List.

SUMMARY: The Committee has received proposals to add to the Procurement List a commodity and a service to be furnished by nonprofit agencies employing persons who are blind or have other severe disabilities.

COMMENTS MUST BE RECEIVED ON OR BEFORE: March 22, 1993.

ADDRESS: Committee for Purchase From People Who Are Blind or Severely Disabled, Crystal Square 3, suite 403, 1735 Jefferson Davis Highway, Arlington, Virginia 22202–3461.

FOR FURTHER INFORMATION CONTACT: Beverly Milkman (703) 603–7740.

SUPPLEMENTARY INFORMATION: This notice is published pursuant to 41 U.S.C. 47(a)(2) and 41 CFR 51–2.3. Its purpose is to provide interested persons an opportunity to submit comments on the possible impact of the proposed actions.

If the Committee approves the proposed additions, all entities of the Federal Government (except as otherwise indicated) will be required to procure the commodity and service listed below from nonprofit agency employing persons who are blind or have other severe disabilities.

I certify that the following actions will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in any additional reporting, recordkeeping or other compliance requirements for small entities other than the small organizations that will furnish the commodity and service to the Government.

2. The action will result in authorizing small entities to furnish the commodity and service to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 46–48c) in connection with the commodity and service proposed for addition to the Procurement List.

Comments on this certification are invited. Commenters should identify the statement(s) underlying the certification on which they are providing additional information.

It is proposed to add the following commodity and service to the Procurement List for production by the nonprofit agencies listed:

Commodity

Clamp, Loop.
5340–01–259–4151
Nonprofit Agency: United Cerebal Palsy of King-Snohomish Counties, Seattle, Washington.

Service

Janitorial/Custodial, U.S. Customhouse, 200 East Bay Street, Charleston, South Carolina.
Nonprofit Agency: Goodwill Industries of Lower South Carolina, Inc., Charleston, South Carolina.

Beverly L. Milkman,

Executive Director.

[FR Doc. 93–3888 Filed 2–18–93; 8:45 am]

BILLING CODE 6820-33-M

DEPARTMENT OF DEFENSE

Department of the Air Force

Air Force Institute of Technology Board of Visitors; A Subcommittee of the Air University Board of Visitors; Meeting

The Air Force Institute of Technology Board of Visitors, a Subcommittee of the Air University Board of Visitors, will hold an open meeting at 8:30 a.m. on 3 March 1993, in the Commandant's Conference Room (ten seats available), Building 125, Wright-Patterson Air Force Base, Ohio.

The purpose of the meeting is to give the board the opportunity to present to the Commandant, Air Force Institute of Technology, a report of findings and recommendations concerning the Institute's educational programs. The findings of the subcommittee will also be reported to the Commander, Air University, at the next regularly scheduled meeting of the Air University Board of Visitors.

For further information on this meeting, contact Major Leslie M. Keffel, Chief, Graduate Programs, Directorate of Operations and Plans, Air Force Institute of Technology, (513) 255–5402 or 4219.

Patsy J. Conner,

Air Force Federal Register Liaison Officer.

[FR Doc. 93–3833; Filed 2–18–93; 8:45 am]

BILLING CODE 3910-01-M

Air University Board of Visitors; Meeting

The Air University Board of Visitors will hold an open meeting on 18–21 April 1993, beginning at 0815 in the Air University Conference Room, Headquarters Air University, Maxwell Air Force Base, Alabama (10 seats available).

The purpose of the meeting is to give the board an opportunity to review Air University educational programs and to present to the Commander, Air University, a report of their findings and recommendations concerning these programs.

For further information on this meeting, contact Dr. Dorothy Reed, Coordinator, Air University, Maxwell Air Force Base, Alabama 36112–6335, telephone (205) 953–5159.

Patsy J. Conner,

Air Force Federal Register Liaison Officer.

[FR Doc. 93–3834 Filed 2–18–93; 8:45 am]

BILLING CODE 3910-01-M

Intent to Grant Exclusive Patent License

Pursuant to the provisions of part 404 of title 37, Code of Federal Regulations, which implements Public Law 96–517, the Department of the Air Force announces its intention to grant Beam Tech Corporation, San Antonio, Texas 78268, an exclusive, domestic license under United States Letters Patent No. 4,948,975, which matured from application Serial No. 07/241,992 filed 8 September 1988 in the names of David N. Erwin, Johnathan L. Kiel, Charles R. Batishko, and Kurt A. Stahl for "Quantitative Luminescence Imaging System."

The license described above will be granted unless an objection thereto, together with a request for an opportunity to be heard, if desired, is received in writing by the addressee set forth below within sixty (60) days from the date of publication of this Notice. Copies of the patent may be obtained upon request from the same addressee.

All communications concerning this Notice should be sent to: Mr. Donald J. Singer, Chief, Patents Division, Air Force Legal Services Agency; AFLSA/JACP, 1501 Wilson Blvd., room 805, Arlington, VA 22209–2403, Telephone No. (703) 696–9047.

Patsy J. Conner,

Air Force Federal Register Liaison Officer.

[FR Doc. 93–3938 Filed 2–18–93; 8:45 am]

BILLING CODE 3910-01-M

Department of the Navy

CNO Executive Panel; Meeting

Pursuant to the provisions of the Federal Advisory Committee Act (5 U.S.C. App. 2), notice is hereby given that the Chief of Naval Operations (CNO) Executive Panel Domestic Issues Task Force will meet March 10–11, 1993, from 9 am to 5 pm, in Alexandria, Virginia.

The purpose of this meeting is to continue efforts to forecast emerging demographic and sociological trends and their effect on the Navy of the future. The agenda of the meeting will consist of discussions of key issues related to domestic changes in response to demographic, sociological, cultural, and political phenomena.

For further information concerning this meeting, contact: Judith A. Holden, Executive Secretary to the CNO Executive Panel, 4401 Ford Avenue, room 601, Alexandria, Virginia 22302–0268, Phone (703) 756–1205.

Dated: February 10, 1993.

Michael P. Rummel,

LCDR, JAGC, USN, Federal Register Liaison Officer.

[FR Doc. 93–3835 Filed 2–18–93; 8:45 am]

BILLING CODE 3810-AE-F

DEPARTMENT OF EDUCATION

[CFDA No. 84.258A]

Even Start; Extending the Closing Date for New Awards

AGENCY: Department of Education.

ACTION: Notice extending the closing date for new awards under the Even Start Program for federally recognized Indian tribes and tribal organizations for fiscal year (FY) 1993.

SUMMARY: On September 21, 1992, the Department of Education published in the **Federal Register** a notice inviting applications under the Even Start Program for federally recognized Indian tribes and tribal organizations for FY 1993. The purpose of this notice is to extend the closing date for transmittal of those applications from March 19, 1993, to April 27, 1993, to provide applicants additional time to submit applications. In the original notice, it was estimated that there would be sufficient funds to make two new awards for FY 1993 of an estimated average size of $150,000 each. However, the Department now anticipates that, after funding continuation applications, there will be sufficient funds for only one new award for FY 1993.

FOR APPLICATIONS OR INFORMATION CONTACT: Patricia McKee, Compensatory Education Programs, U.S. Department of Education, 400 Maryland Avenue SW., room 2017, Washington, DC 2202–6132. Telephone: (202) 401–1692. Deaf and hearing impaired individuals may call the Federal Dual Party Relay Service at 1–800–877–8339 (in the Washington, DC 202 area code, telephone 708–9300) between 8 a.m. and 7 p.m., Eastern time.

Program Authority: 20 U.S.C. 2741–2749.

Dated: February 12, 1993.

Mary Jean LeTendre,

Acting Assistant Secretary for Elementary and Secondary Education.

[FR Doc. 93–3855 Filed 2–18–93; 8:45 am]

BILLING CODE 4000-01-U

National Assessment Governing Board; Meeting

AGENCY: National Assessment Governing Board; Education.

ACTION: Notice of meeting.

SUMMARY: This notice sets forth the schedule and proposed agenda of a forthcoming meeting of the National Assessment Governing Board. This notice also describes the functions of the Board. Notice of this meeting is required under section 10(a)(2) of the Federal Advisory Committee Act. This document is intended to notify the general public of their opportunity to attend.

DATES: March 4–6, 1993.

TIME: March 4, Achievement Levels Committee Meeting, 2 p.m.–4 p.m., (closed); Subject Area committee #2, 4 p.m.–6 p.m., (open); Nominations Committee, 4 p.m.–6 p.m., (closed) Executive Committee, 7 p.m.–9 p.m. (open). March 5, Full Board, 8 a.m.–5:30 p.m., (open). March 6, Full Board, 8 a.m.–11:30 a.m., (open); 11:30 a.m.–12 noon, (closed).

LOCATION: Madison Hotel, 15th and M Streets, NW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mary Ann Wilmer, Operations Officer, National Assessment Governing Board, suite 825, 800 North Capitol Street, NW., Washington, DC, 20002–4823, Telephone: (202) 357–6938.

SUPPLEMENTARY INFORMATION: The National Assessment Governing Board is established under section 406(i) of the General Education Provisions Act (GEPA) as amended by section 3403 of the National Assessment of Educational Progress Improvement Act (NAEP Improvement Act), title III–C of the Augustus F. Hawkins—Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988 (Pub. L. 100–297), (20 U.S.C. 1221e–1).

The Board is established to formulate policy guidelines for the National Assessment of Educational Progress. The Board is responsible for selecting subject areas to be assessed, developing assessment objectives, identifying appropriate achievement goals for each grade and subject tested, and establishing standards and procedures for interstate and national comparisons.

On March 4, the Achievement Levels Committee will meet to discuss the writing achievement levels. The discussion will include references to specific items for the assessment, the disclosure of which might significantly frustrate implementation of the NAEP. This session must be closed to the public because reference may be made to data which may be misinterpreted, incorrect, or incomplete. Premature disclosure of this data might significantly frustrate implementation of a proposed agency action. Such matters

are protected by exemption 9(B) of section 552b(c) of title 5 U.S.C.

The Subject Area committee #2 will meet in open session from 4 to 6 p.m. to hear a panel presentation on the relation among the National Arts Standards, Arts Partnership Project, and the NAEP Arts Consensus. The Committee will also receive a briefing on the status of the Arts Consensus Project.

The Nominations Committee will meet in closed session from 4 to 6 p.m. to review and discuss qualifications of nominees for vacancies in the membership of the National Assessment Governing Board. The review and subsequent discussions of this information relate solely to the internal rules and practices of an agency and will disclose information of a personal nature where disclosure would constitute a clearly unwarranted invasion of personal privacy if conducted in open session. Such matters are protected by exemptions (2) and (6) of section 552b(c) of title 5 U.S.C.

Also, on March 4, the Executive Committee will meet in open session from 7 p.m. to 9 p.m. The agenda items for this meeting include the review and approval of the recommendations for Future NAEP II; review of the 1994 budget; and update on the reauthorization of State NAEP.

On March 5, the full Board will meet in open session from 8:30 a.m. to 9:30 a.m. The agenda will be reviewed; a new member will be administered the oath of office; the Executive Director's report will be presented. During the period from 9:30 a.m. to 11 a.m., there will be open meetings of the Reporting and Dissemination Committee, Subject Area Committee #1, and the Design and Analysis Committee. At 12 noon, the full Board will reconvene and be in session until 5 p.m. The agenda includes a briefing and discussion on the writing achievement levels; update on NAEP activities, a symposium on linking test results, and a presentation on the International Education Association Study on Reading.

On March 6, the full Board will meet from 9 a.m. until adjournment. The proposed agenda for this portion of the meeting includes a presentation from the National Commission on Time and Learning, and reports from the NAGB committees. Beginning at 11:30 a.m. through adjournment, 12 noon, the meeting will be closed to the public. During the closed portion, the Board will consider the recommendations from the Nominations Committee of candidates for Board membership. Discussion of the candidates' qualifications relate solely to the internal personnel rules and practices of an agency and will disclose information of a personal nature where disclosure would constitute a clearly unwarranted invasion of personal privacy if conducted in open session. Such matters are protected by exemptions (2) and (6) of section 552b(c) of title 5 U.S.C.

A summary of the activities of the closed sessions and related matters, which are informative to the public and consistent with the policy of section 5 U.S.C. 552b, will be available to the public within 14 days after the meeting. Records are kept of all Board proceedings and are available for public inspection at the U.S. Department of Education, National Assessment Governing Board, suite 825, 800 North Capitol Street, NW., Washington, DC, from 8:30 a.m. to 5 p.m.

Roy Truby,

Executive Director, National Assessment Governing Board.

[FR Doc. 93–3880 Filed 2–18–93; 8:45 am]

BILLING CODE 4000–01–M

National Education Goals Panel; Meeting

AGENCY: National Education Goals Panel: Education.

ACTION: Notice of cancellation.

SUMMARY: Notice is hereby given of the cancellation of the National Education Goals Panel meeting scheduled for February 19, 1993, at the Hyatt Regency Washington on Capitol Hill, 400 New Jersey Avenue, NW., Washington, DC, as published in the **Federal Register** on Friday, January 22, 1993, Volume 58, Number 13, page 5718. See notice in the Federal Register for the rescheduled date and times of this meeting.

FOR FURTHER INFORMATION, CONTACT: Public Information Officer, 1850 M Street, NW., suite 270, Washington, DC 20036. Telephone: (202) 632–0952.

Dated: February 17, 1993.

Ann V. Bailey,

Committee Management Officer, U.S. Department of Education.

[FR Doc. 93–4038 Filed 2–17–93; 2:21 pm]

BILLING CODE 4000–01–M

National Education Goals Panel; Meeting

AGENCY: National Education Goals Panel: Education.

ACTION: Notice of meeting.

SUMMARY: This notice sets forth the date and location of a forthcoming meeting of the National Education Goals Panel. This notice also describes the functions of the Panel. Notice of this meeting is required under section 10(a)(2) of the Federal Advisory Committee Act.

DATES: March 3, 1993 from 10 a.m. to 1 p.m.

ADDRESSES: Hyatt Regency Washington on Capitol Hill, 400 New Jersey Avenue, NW., Washington, DC 20001.

FOR FURTHER INFORMATION CONTACT: Public Information Officer, 1850 M Street, NW., suite 270, Washington, DC 20036. Telephone: (202) 632–0952

SUPPLEMENTARY INFORMATION: The National Education Goals Panel was created to monitor and report annually to the President, Governors and Congress on the progress of the nation toward meeting the six National Education Goals adopted by the President and Governors in 1989.

The meeting of the Panel is open to the public. The agenda includes discussion of feedback to the 1992 National Education Goals Report and suggestions for improvement of format.

The public is given less than 15 days notice due to scheduling conflicts. Records are kept of all Panel proceedings, and are available for public inspection at the Office of the Goals Panel at 1850 M Street, NW., suite 270, Washington, DC 20036, from the hours of 10 a.m. to 5 p.m.

Dated: February 17, 1993.

Ann V. Bailey,

Committee Management Officer, U.S. Department of Education.

[FR Doc. 93–4039 Filed 2–17–93; 2:21 pm]

BILLING CODE 4000–01–M

DEPARTMENT OF ENERGY

Notification of Floodplain Involvement for the Proposed Clean Coal Technology Project at the Wabash River Generating Station, West Terre Haute, IN

AGENCY: U.S. Department of Energy.

ACTION: Notice of floodplain involvement.

SUMMARY: As part of DOE's Clean Coal Technology (CCT) Demonstration Program, DOE proposes to provide cost-shared financial assistance to the Wabash River Coal Gasification Repowering Project Joint Venture (WRJV) for the construction and operation of a project entitled, "Wabash River Coal Gasification Combined Cycle (CGCC) Repowering Project." The WRJV partners are Public Service Company of Indiana (PSI) Energy, Inc., of Plainfield, Indiana, and Destec Energy, Inc., of

Houston, Texas. The project would be located in Vigo County, Indiana. The southern portion of the ash pond system, within which storage of the gasification slag material is proposed, is included in the 100-year floodplain as depicted on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM). In accordance with 10 CFR part 1022, DOE will prepare a floodplain assessment and will perform this proposed financial assistance action in a manner so as to avoid or minimize potential impacts on the affected floodplain. The assessment will be included in the Environmental Assessment (EA) being prepared for the proposed project in accordance with the requirements of the National Environmental Policy Act (NEPA). A floodplain statement of findings will be included in any Finding of No Significant Impact (FONSI) that is issued following completion of the EA.

COMMENT PERIOD: Written comments or questions concerning this project should be directed to the address noted below. Comments are due no later than March 8, 1993.

ADDRESSES: Mr. Bruce Buvinger, Environmental Project Manager, Morgantown Energy Technology Center (METC), U.S. Department of Energy, P.O. Box 880, Morgantown, WV 26505, Telephone: (304) 291–4379 and Fax: (304) 291–4469.

FOR FURTHER INFORMATION CONTACT: For general information on DOE floodplain review requirements, or for information on the environmental assessment required by the National Environmental Policy Act (NEPA), please contact: Carol M. Borgstrom, Director, Office of NEPA Oversight, EH–25, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585, Telephone: (202) 586–4600 or (800) 472–2756 and Fax: (202) 586–7031.

SUPPLEMENTARY INFORMATION: The proposed project would be constructed at the Wabash River Generating Station of PSI Energy, Inc., which consists of six coal-fired boiler units, and is located on an approximately 400 acre tract of land along the west bank of the Wabash River, west of the City of Terre Haute, in Vigo County, Indiana. The proposed project would demonstrate and evaluate a coal gasification combined cycle (CGCC) oxygen-blown, two-stage, entrained-flow, repowering technology. Synthetic gas produced by this process would be cleaned of sulfur and particulates and burned in a new, 191 Megawatt-electric (MWe) power output, gas turbine. A heat recovery steam generator would use heat from the gas turbine exhaust to produce high pressure steam. This steam and the steam generated in the gasification process would be used to repower an existing 100 MWe steam turbine (Wabash Station Unit 1).

Project construction would involve a retrofit to the existing Wabash Station power plant. All construction would take place on the grounds of the existing station. Once the equipment is installed, the CGCC demonstration and evaluation project would operate for a period of three years, followed by commercial operation for approximately 17 years.

One of the by-products of the coal gasification process is slag, which is glassy, sand-like, material that is considered non-toxic and does not leach contaminants to soil. This slag would be stored in the southeast corner of the existing Wabash Station ash pond system. While operating, the gasifier would generate up to 105,000 tons of slag per year. PSI plans to market the slag as structural fill or asphalt road aggregate, thereby limiting the amount of storage required. In any event, the proposed ash pond storage site has the capacity for 20 years of storage of the entire quantity of slag material that would be generated.

The ash pond system is located immediately south of the Wabash Station, and now receives about 150,000 tons of combined fly ash and bottom ash per year from the six existing generating units. The ash pond system includes a series of cells where dewatered ash is managed, and three settling ponds are used to control total suspended solids prior to discharge to the river. The entire ash pond system is surrounded by a levee constructed to contain settling pond waters and protect the managed ash from flood waters of the Wabash River.

The levee surrounding the ash pond system was constructed after a Certificate of Approval for Construction in a Floodway was granted by the Indiana Department of Natural Resources. The 100-year base flood elevation depicted on FEMA's FIRM is approximately 476 feet. The crest of the levee is approximately 483.5 feet, maintaining 7.5 feet of freeboard (height above the base flood elevation of a 100-year flood event) throughout its length. However, the current FEMA FIRM does not recognize the protection afforded by the levee, and shows the delineation of the 100-year floodplain as if the levee did not exist. Consequently, the southern portion of the ash pond system, within which storage of the gasification slag material is proposed, is included in the 100-year floodplain as depicted on the FEMA FIRM. Slag storage is the only proposed project activity within FEMA's designated 100-year floodplain. PSI has not requested that FEMA amend or revise the FIRM because, to date, no structures for which flood insurance would be required have been constructed in the area protected by the levee. Only under circumstances where PSI would want to avoid flood insurance requirements would it be necessary to request such a revision or map amendment. Consequently, although the proposed slag storage area is shown within the 100-year floodplain on FEMA's FIRM, actually it would be protected from floodwaters by the levee system which has a crest height of a minimum of 7.5 feet above the 100-year flood elevation.

In accordance with DOE regulations for compliance with floodplain and wetland environmental review requirements (10 CFR part 1022), DOE will prepare a floodplain assessment for this proposed DOE action. The assessment will be included in the Environmental Assessment (EA) being prepared for the proposed project in accordance with the requirements of NEPA. A floodplain statement of findings will be included in any Finding of No Significant Impact (FONSI) that is issued following the completion of the EA.

Maps and additional information are available from METC as provided in the **ADDRESS** section of this Notice.

Issued in Washington, DC, this 10th day of February 1993, for the United States Department of Energy.

Jack S. Siegel,

Acting Assistant Secretary for Fossil Energy.

[FR Doc. 93–3959 Filed 2–18–93; 8:45 am]

BILLING CODE 6450-01-M

Advisory Committee on Environmental Restoration and Waste Management; Meeting

Pursuant to the provisions of the Federal Advisory Committee Act (Pub. L. 92–463, 86 Stat. 770), notice is hereby given of the following Advisory Committee Meeting:

Name: Environmental Restoration & Waste Management Advisory Committee (EMAC).

Date and Time: Tuesday, March 16, 1993, 7:30 p.m. to 10:30 p.m. Wednesday, March 17, 1993, 8:30 a.m. to 5:15 p.m. Thursday, March, 18, 1993, 8 a.m. to 6 p.m.

Place: Tennessee Army National Guard Armory, 1780 Oak Ridge Turnpike, Oak Ridge, Tennessee 37830

Contact: James T. Melillo, Executive Secretary, EMAC, EM–1, 1000

Independence Avenue, SW. Washington, DC 20585, (202) 479–1191.

Purpose of the Committee: The purpose of the Committee is to provide the Assistant Secretary, Environmental Restoration and Waste Management (EM) with advice and recommendations on both the substance and the process of the EM Programmatic Environmental Impact Statement (PEIS) and other EM projects from the perspectives of affected groups and State and local Governments. The EMAC will help to improve the Environmental Restoration and Waste Management Program by assisting in the process of securing consensus recommendations, and providing the department's numerous publics with opportunities to make their views known on the Environmental Restoration & Waste Management Program.

Tentative Agenda

Tuesday, March 16, 1993

7:30 p.m. Public Comment Session
10:30 p.m. Meeting Adjourns

Wednesday, March 17, 1993

8:30 a.m.
Chairman Glenn Paulson Opens Meeting
Environmental Restoration and Waste Management Advisory Committee Mission Discussion
12:15 p.m. Lunch
1:45 p.m. Technology Development/ Contamination Issue at Oak Ridge Discussion
5:15 p.m. Meeting Adjourns

Thursday, March 18, 1993

8:30 a.m.
Chairman Paulson Reconvenes Public Meeting
Public Participation Discussion—Media Panel
Committee Business
12:15 p.m. Lunch
1:45 p.m. EPA Advisory Committee on Federal Facility Environmental Restoration (Keystone) Discussion
4 p.m. Committee Business
6 p.m. Meeting Ends

Public Participation: The meeting is open to the public. Written statements may be filed with the Committee either before or after the meeting. Members of the public who wish to make oral statements pertaining to agenda items should contact James T. Melillo at the address or telephone number listed above. Individuals wishing to orally address the Committee should contact Ms. Sandy Perkins by phone in Oak Ridge at (615) 576–1590 or call (800) 862–8860 and leave a message. Individuals may also register on March 16, 1993, at the meeting. Every effort will be made to hear all those wishing to speak to the Committee, on a first come, first serve basis. Those who call in and reserve time will be given the opportunity to speak first. The Committee Chairperson is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business.

Transcripts: The transcript of the meeting will be available for public review and copying at the Freedom of Information Public Reading Room, 1E–190, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585 between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

Issued at Washington, DC on February 16, 1993.

Marcia L. Morris,

Deputy Advisory Committee Management Officer.

[FR Doc. 93–3960 Filed 2–18–93; 8:45 am]

BILLING CODE 6455–01–M

Federal Energy Regulatory Commission

[Docket Nos. ST93–1390–000 through ST93–2020–000]

ANR Pipeline Co.; Self-Implementing Transactions

February 12, 1993.

Take notice that the following transactions have been reported to the Commission as being implemented pursuant to part 284 of the Commission's regulations, sections 311 and 312 of the Natural Gas Policy Act of 1978 (NGPA), section 7 of the NGA and section 5 of the Outer Continental Shelf Lands Act.[1]

The "Recipient" column in the following table indicates the entity receiving or purchasing the natural gas in each transaction.

The "Part 284 Subpart" column in the following table indicates the type of transaction.

A "B" indicates transportation by an interstate pipeline on behalf of an intrastate pipeline or a local distribution company pursuant to § 284.102 of the Commission's regulations and section 311(a)(1) of the NGPA.

A "C" indicates transportation by an intrastate pipeline on behalf of an interstate pipeline or a local distribution company served by an interstate pipeline pursuant to § 284.122 of the Commission's regulations and section 311(a)(2) of the NGPA.

A "D" indicates a sale by an intrastate pipeline to an interstate pipeline or a local distribution company served by an interstate pipeline pursuant to § 284.142 of the Commission's Regulations and section 311(b) of the NGPA. Any interested person may file a complaint concerning such sales pursuant to § 284.147(d) of the Commission's Regulations.

An "E" indicates an assignment by an intrastate pipeline to any interstate pipeline or local distribution company pursuant to § 284.163 of the Commission's regulations and section 312 of the NGPA.

A "G" indicates transportation by an interstate pipeline on behalf of another interstate pipeline pursuant to § 284.222 and a blanket certificate issued under § 284.221 of the Commission's regulations.

A "G–I" indicates transportation by an intrastate pipeline company pursuant to a blanket certificate issued under § 284.227 of the Commission's regulations.

A "G–S" indicates transportation by interstate pipelines on behalf of shippers other than interstate pipelines pursuant to § 284.223 and a blanket certificate issued under § 284.221 of the Commission's regulations.

A "G–LT" or "G–LS" indicates transportation, sales or assignments by a local distribution company on behalf of or to an interstate pipeline or local distribution company pursuant to a blanket certificate issued under § 284.224 of the Commission's regulations.

A "G–HT" or "G–HS" indicates transportation, sales or assignments by a Hinshaw Pipeline pursuant to a blanket certificate issued under § 284.224 of the Commission's regulations.

A "K" indicates transportation of natural gas on the Outer Continental Shelf by an interstate pipeline on behalf of another interstate pipeline pursuant to § 284.303 of the Commission's regulations.

A "K–S" indicates transportation of natural gas on the Outer Continental Shelf by an interstate pipeline on behalf of shippers other than interstate pipelines pursuant to § 284.303 of the Commission's regulations.

Lois D. Cashell,

Secretary.

[1] Notice of a transaction does not constitute a determination that the terms and conditions of the proposed service will be approved or that the noticed filing is in compliance with the Commission's regulations.

Docket No.[1]	Transporter/seller	Recipient	Date filed	Part 284 subpart	Estimated maximum daily quantity[2]	Aff. Y/A/N[3]	Rate Sch.	Date commenced	Projected termination date
ST93–1390	ANR Pipeline Co	Northern Indiana Public Service Co.	12–01–92	G–S	12,261	N	I	11–01–92	Indef.
ST93–1391	ANR Pipeline Co	Ohio Gas Co	12–01–92	G–S	3,100	N	I	11–01–92	Indef.
ST93–1392	ANR Pipeline Co	Northern Indiana Fuel & Light Co.	12–01–92	G–S	14,319	N	I	11–01–92	Indef.
ST93–1393	ANR Pipeline Co	Midwest Gas	12–01–92	G–S	2,318	N	I	11–01–92	10–31–93.
ST93–1394	ANR Pipeline Co	Michigan Gas Utilities	12–01–92	G–S	42,262	N	I	11–01–92	10–31–93.
ST93–1395	ANR Pipeline Co	Midwest Gas	12–01–92	G–S	1,800	N	I	11–01–92	10–31–93.
ST93–1396	ANR Pipeline Co	Wisconsin Gas Co	12–01–92	G–S	7,445	N	I	11–01–92	Indef.
ST93–1397	ANR Pipeline Co	Wisconsin Power & Light Co.	12–01–92	G–S	81,416	N	I	11–01–92	Indef.
ST93–1398	ANR Pipeline Co	Wisconsin Natural Gas Co.	12–01–92	G–S	258,000	N	I	11–01–92	Indef.
ST93–1399	ANR Pipeline Co	Iowa Electric Light & Power Co.	12–01–92	G–S	2,621	N	I	11–01–92	10–31–93.
ST93–1400	ANR Pipeline Co	Illinois Power Co	12–01–92	G–S	6,315	N	I	11–01–92	10–31–93.
ST93–1401	ANR Pipeline Co	Associated Natural Gas Co.	12–01–92	G–S	7,000	N	I	11–01–92	10–31–93.
ST93–1402	ANR Pipeline Co	Ohio Valley Gas Corp	12–01–92	G–S	7,500	N	I	11–01–92	10–31–93.
ST93–1403	ANR Pipeline Co	Michigan Gas Utilities	12–01–92	G–S	42,262	N	I	11–01–92	10–31–93.
ST93–1404	ANR Pipeline Co	Michigan Gas Co	12–01–92	G–S	50,136	N	I	11–01–92	10–31–93.
ST93–1405	ANR Pipeline Co	Madison Gas & Electric Co.	12–01–92	G–S	59,150	N	I	11–01–92	Indef.
ST93–1406	ANR Pipeline Co	Iowa Southern Utilities Co.	12–01–92	G–S	15,600	N	I	11–01–92	10–31–93.
ST93–1407	ANR Pipeline Co	United Cities Gas Co	12–01–92	G–S	8,800	N	I	11–01–92	Indef.
ST93–1408	ANR Pipeline Co	Wisconsin Fuel & Light Co.	12–01–92	G–S	72,000	N	I	11–01–92	Indef.
ST93–1409	ANR Pipeline Co	Wisconsin Gas Co	12–01–92	G–S	676,700	N	I	11–01–92	Indef.
ST93–1410	Williston Basin Inter. P/L Co.	Montana-Dakota Utilities Co.	12–01–92	B	53,833	A	F	11–01–92	06–30–97.
ST93–1411	Williston Basin Inter. P/L Co.	Koch Hydrocarbon Co	12–01–92	G–S	16,744	A	F	11–01–92	02–28–93.
ST93–1412	Williston Basin Inter. P/L Co.	Amerada Hess Corp	12–01–92	G–S	35,000	N	F	11–01–92	11–30–92.
ST93–1413	Williston Basin Inter. P/L Co.	Koch Hydrocarbon Co	12–01–92	G–S	872	A	F	11–01–92	03–31–93.
ST93–1414	United Gas Pipe Line Co.	Polaris Pipeline Corp	12–01–92	G–S	20,960	N	I	10–28–92	02–25–93.
ST93–1415	United Gas Pipe Line Co.	MG Natural Gas Corp	12–01–92	G–S	41,920	N	I	11–17–92	03–17–93.
ST93–1416	United Gas Pipe Line Co.	TXO Gas Ventures Corp.	12–01–92	G–S	157,200	N	I	11–19–92	03–19–93.
ST93–1417	Tennessee Gas Pipline Co.	Conoco Inc	12–01–92	G–S	217,175	N	I	11–01–92	Indef.
ST93–1418	Tennessee Gas Pipline Co.	Public Service Electric & Gas Co.	12–01–92	B	10,234	N	F	11–01–92	Indef.
ST93–1419	Tennessee Gas Pipline Co.	Southern Connecticut Gas Co.	12–01–92	B	50,000	N	I	11–01–92	Indef.
ST93–1420	Tennessee Gas Pipline Co.	Alabama-Tennessee Natural Gas Co.	12–01–92	G–S	10,000	N	F	11–01–92	Indef.
ST93–1421	Tennessee Gas Pipline Co.	City of Decatur	12–01–92	G–S	6,000	N	F	11–01–92	Indef.
ST93–1422	Transwestern Pipeline Co.	Aquila Energy Marketing Corp.	12–01–92	G–S	200,000	N	I	11–01–92	Indef.
ST93–1423	Transwestern Pipeline Co.	Energas Co	12–01–92	B	200	N	I	11–01–92	Indef.
ST93–1424	Transwestern Pipeline Co.	Enron Gas Marketing, Inc.	12–01–92	G–S	100,000	A	I	11–06–92	Indef.
ST93–1425	Transwestern Pipeline Co.	Cimarron Gas Co., Inc	12–01–92	G–S	100,000	N	I	11–01–92	Indef.
ST93–1426	Transwestern Pipeline Co.	New Mexico Natural Gas, Inc.	12–01–92	G–S	2,000	N	I	11–01–92	Indef.
ST93–1427	Northern Natural Gas Co.	Northern States Power Co.	12–01–92	B	249,807	N	F/I	11–01–92	Indef.
ST93–1428	Northern Natural Gas Co.	City of Duluth	12–01–92	G–S	11,450	N	F/I	11–01–92	Indef.
ST93–1429	Northern Natural Gas Co.	Sheehan's Gas Co	12–01–92	G–S	260	N	F/I	11–01–92	Indef.
ST93–1430	Northern Natural Gas Co.	Prairielands Energy Marketing, Inc.	12–01–92	G–S	250,000	Y	I	11–04–92	10–31–93.
ST93–1431	Transcontinental Gas P/L Corp.	United Gas Pipe Line Co.	12–01–92	B	156,500	N	I	11–01–92	Indef.
ST93–1432	Kentucky P/L & Storage Co., Inc.	Columbia Gas of Ohio, Inc.	12–01–92	G–NT	20,000	N	I	10–13–92	03–31–01.
ST93–1433	Noark Pipeline Systems, L.P.	MS River Trans. Corp., et al.	12–01–92	C	60,000	N	I	10–29–92	09–30–94.
ST93–1434	Noark Pipeline Systems, L.P.	MS River Trans. Corp., et al.	12–01–92	C	141,000	N	I	11–01–92	08–31–93.
ST93–1435	Noark Pipeline Systems, L.P.	MS River Trans. Corp., et al.	12–01–92	C	30,000	N	I	10–06–92	08–31–94.

Docket No.[1]	Transporter/seller	Recipient	Date filed	Part 284 subpart	Estimate maximum daily quantity[2]	Aff. Y/N[3]	Rate Sch.	Date commenced	Projected termination date
ST93–1436	Noark Pipeline Systems, L.P.	MS River Trans. Corp., et al.	12–01–92	C	140,000	N	I	10–26–92	09–31–94.
ST93–1437	Noark Pipeline Systems, L.P.	MS River Trans. Corp., et al.	12–01–92	C	141,000	N	I	10–04–92	09–30–93.
ST93–1438	East Texas Gas Systems.	Texas Gas Transmission.	12–01–92	C	50,000	N	I	11–01–92	Indef.
ST93–1439	Overland Trail Transmission Co.	Kern River Gas Transmission	12–01–92	C	50,000	N	I	11–01–92	Indef.
ST93–1440	Peoples Natural Gas Co.	CNG Trading Co	12–01–92	G–HT	4,808	Y	I	11–01–92	03–31–93.
ST93–1441	Questar Pipeline Co	Colorado Interstate Gas Co., et al.	12–01–92	G	15,000	Y	F	11–01–92	Indef.
ST93–1442	Channel Industries Gas Co.	Texas Eastern Transmission Corp.	12–01–92	C	50,000	N	I	11–01–92	Indef.
ST93–1443	Delhi Gas Pipeline Corp.	Black Marlin Pipeline Co.	12–01–92	C	250,000	N	I	11–01–92	Indef.
ST93–1444	Natural Gas P/L Co. of America.	Iowa Electric Light & Power Co.	12–01–92	B	25,000	N	I	11–01–92	Indef.
ST93–1445	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12–01–92	G–S	200,000	A	I	11–13–92	Indef.
ST93–1446	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12–01–92	G–S	100,000	A	I	11–01–92	Indef.
ST93–1447	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12–01–92	G–S	300,000	A	I	11–01–92	Indef.
ST93–1448	Natural Gas P/L Co. of America.	Tristar Gas Co	12–01–92	G–S	50,000	N	I	11–01–92	Indef.
ST93–1449	Natural Gas P/L Co. of America.	Arcadian Corp	12–01–92	G–S	55,000	N	I	11–01–92	Indef.
ST93–1450	Natural Gas P/L Co. of America.	Catex Energy, Inc	12–01–92	G–S	100,000	N	I	11–01–92	Indef.
ST93–1451	Natural Gas P/L Co. of America.	Oxy USA Inc	12–01–92	G–S	50,000	Y	I	11–01–92	Indef.
ST93–1452	Natural Gas P/L Co. of America.	Texpar Energy, Inc	12–01–92	G–S	250,000	N	I	11–01–92	Indef.
ST93–1453	Natural Gas P/L Co. of America.	Hadson Gas Systems, Inc.	12–01–92	G–S	10,000	N	F	11–01–92	10–31–93.
ST93–1454	Natural Gas P/L Co. of America.	Transok Gas Co	12–01–92	G–S	25,000	N	I	11–01–92	Indef.
ST93–1455	Trunkline Gas Co	Ultramar Oil & Gas Limited.	12–01–92	G–S	10,000	N	I	11–02–92	Indef.
ST93–1456	Trunkline Gas Co	Panhandle Trading Co	12–01–92	G–S	50,000	Y	I	11–01–92	Indef.
ST93–1457	Trunkline Gas Co	National Steel Corp	12–01–92	G–S	3,500	N	F	11–01–92	Indef.
ST93–1458	Trunkline Gas Co	Miami Valley Resources, Inc.	12–01–92	G–S	4,629	N	F	11–01–92	Indef.
ST93–1459	Trunkline Gas Co	Miami Valley Resources, Inc.	12–01–92	G–S	846	N	F	11–01–92	Indef.
ST93–1460	Trunkline Gas Co	Michigan Gas Utilities .	12–01–92	G–S	3,500	N	F	11–01–92	Indef.
ST93–1461	Trunkline Gas Co	Interstate Gas Supply, Inc.	12–01–92	G–S	2,000	N	F	11–01–92	Indef.
ST93–1462	Nueces Co	Colorado Interstate Gas Co.	12–02–92	C	1,000	N	F	11–05–92	Indef.
ST93–1463	ANR Pipeline Co	Wisconsin Public Service Corp.	12–02–92	G–S	184,400	N	I	11–01–92	Indef.
ST93–1464	Viking Gas Transmission Co.	Great Plains Natural Gas Co.	12–02–92	B	3,000	N	F	11–03–92	Indef.
ST93–1465	Tennessee Gas Pipeline Co.	Pennsylvania Gas & Water Co.	12–02–92	G–S	23,000	N	F	11–03–92	Indef.
ST93–1466	Tennessee Gas Pipeline Co.	United States Gypsum Co.	12–02–92	G–S	8,900	N	I	11–02–92	Indef.
ST93–1467	East Ohio Gas Co	Washington Gas Light Co.	12–02–92	C	23,000	N	I	11–01–92	03–31–93.
ST93–1468	Transcontinental Gas P/L Corp.	Panhandle Eastern Pipe Line Co.	12–02–92	B	1,100	N	I	11–03–92	Indef.
ST93–1469	Transcontinental Gas P/L Corp.	Virginia Natural Gas Co.	12–02–92	B	355,900	N	I	11–10–92	Indef.
ST93–1470	Gulf Coast Natural Gas Co.	United Gas Pipe Line Co.	12–02–92	C	15,000	N	I	11–01–92	Indef.
ST93–1471	Panhandle Eastern Pipe Line Co.	Northern Indiana Fuel & Light Co.	12–02–92	G–S	8,018	N	I	10–01–92	Indef.
ST93–1472	CNG Transmission Corp.	Parker-Hannifin Corp ..	12–02–92	G–S	1,500	N	I	11–02–92	Indef.
ST93–1473	CNG Transmission Corp.	AGF Direct Sales, Inc .	12–02–92	G–S	5,000	N	I	11–06–92	Indef.
ST93–1474	CNG Transmission Corp.	Georgia Pacific Corp ...	12–02–92	G–S	2,000	N	I	11–11–92	Indef.
ST93–1475	Tennessee Gas Pipeline Co.	AGF, Inc	12–03–92	G–S	5,000	N	I	11–05–92	Indef.
ST93–1476	Transamerican Natural Gas Corp.	Natural Gas P/L Co. of America.	12–03–92	C	15,000	N	I	10–22–92	Indef.
ST93–1477	Transamerican Natural Gas Corp.	United Gas Pipe Line Co.	12–03–92	C	50,000	N	I	11–05–92	Indef.

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ST93–1478	Transamerican Natural Gas Corp.	United Gas Pipe Line Co.	12–03–92	C	100,000	N	I	11–04–92	Indef.
ST93–1479	Transamerican Natural Gas Corp.	Trunkline Gas Co	12–03–92	C	100,000	N	I	11–01–92	Indef.
ST93–1480	Gulf Energy Pipeline Co.	United Gas Pipe Line Co.	12–03–92	C	6,000	N	I	11–01–92	Indef.
ST93–1481	Lone Star Gas Co	Transcontinental Gas P/L Corp.	12–03–92	C	50,000	N	I	11–04–92	Indef.
ST93–1482	Trunkline Gas Co	MEGA Natural Gas Co	12–03–92	G–S	50,000	N	I	11–04–92	Indef.
ST93–1483	Trunkline Gas Co	Miami Valley Resources, Inc.	12–03–92	G–S	5,000	N	I	11–06–92	Indef.
ST93–1484	Trunkline Gas Co	Eastex Hydrocarbons, Inc.	12–03–92	G–S	20,000	N	I	11–04–92	Indef.
ST93–1485	Florida Gas Transmission Co.	Transok Gas Co	12–03–92	G–S	20,000	N	I	11–02–92	Indef.
ST93–1486	Northern Natural Gas Co.	Foster Wheeler Twin Cities, Inc.	12–03–92	G–S	9,000	N	F/I	11–01–92	Indef.
ST93–1487	Northern Natural Gas Co.	Cimarron Gas Cos., Inc.	12–03–92	G–S	100,000	N	F/I	10–01–92	Indef.
ST93–1488	Northern Natural Gas Co.	Metropolitan Utilities District.	12–03–92	G–S	46,200	N	F/I	11–01–92	Indef.
ST93–1489	Northern Natural Gas Co.	City of Sac City	12–03–92	G–S	893	N	F/I	11–01–92	Indef.
ST93–1490	Northern Natural Gas Co.	City of Round Lake	12–03–92	B	[illegible]	N	F/I	11–01–92	Indef.
ST93–1491	Northern Natural Gas Co.	Terra International Inc .	12–03–92	B	9,000	N	F/I	11–01–92	03–31–93.
ST93–1492	Northern Natural Gas Co.	Peoples Natural Gas Co.	12–03–92	B	2,568	N	F/I	11–01–92	Indef.
ST93–1493	Northern Natural Gas Co.	Iowa-Illinois Gas & Elec. Co.	12–03–92	G–S	15,000	N	F/I	11–01–92	Indef.
ST93–1494	Northern Natural Gas Co.	Great Plains Natural Gas Co.	12–03–92	G–S	4,250	N	F/I	11–01–92	03–31–97.
ST93–1495	Northern Natural Gas Co.	Bridgegas U.S.A., Inc ..	12–03–92	G–S	200,000	N	F/I	11–01–92	Indef.
ST93–1496	Northern Natural Gas Co.	Western Gas Marketing Inc.	12–03–92	G–S	100,000	N	F/I	11–01–92	Indef.
ST93–1497	Transcontinental Gas P/L Corp.	Texas-Ohio Gas, Inc ...	12–03–92	G–S	30,000	N	I	11–13–92	Indef.
ST93–1498	Arkla Energy Resources.	Centennial Natural Gas Corp. .	12–03–92	G–S	75,000	N	I	11–29–92	Indef.
ST93–1499	Arkla Energy Resources.	Anadarko Trading Co ..	12–03–92	G–S	50,000	N	I	11–29–92	Indef.
ST93–1500	Arkla Energy Resources.	Arkla Energy Marketing Co.	12–03–92	G–S	4,000	A	F	09–01–92	Indef.
ST93–1501	Arkla Energy Resources.	Tidewest Trading & Transport Co.	12–03–92	G–S	100,000	N	F	11–25–92	Indef.
ST93–1502	Lone Star Gas Co	United Gas Pipe Line Co.	12–04–92	C	50,000	N	I	11–25–92	Indef.
ST93–1503	Williston Basin Inter. P/L Co.	Hiland Partners	12–04–92	G–S	76,350	A	I	11–05–92	05–31–93.
ST93–1504	Jackson Pipeline Co ...	Citizens Gas & Coke Utility.	12–04–92	G–HT	34,035	N	I	11–01–92	03–31–93.
ST93–1505	Colorado Interstate Gas Co.	Consolidated Fuel Corp.	12–04–92	G–S	24,000	N	I	11–16–92	Indef.
ST93–1506	Colorado Interstate Gas Co.	Texaco Gas Marketing Co.	12–04–92	G–S	30,000	N	I	11–16–92	Indef.
ST93–1507	Southern Natural Gas Co.	Cullman-Jefferson Counties Gas Dist.	12–04–92	G–S	4,000	N	I	11–16–92	03–16–93.
ST93–1508	Southern Natural Gas Co.	United Gas Pipe Line Co.	12–04–92	G–S	100,000	N	I	11–17–92	Indef.
ST93–1509	Southern Natural Gas Co.	City of Tallahassee	12–04–92	G–S	5,611	N	I	10–01–92	09–30–96.
ST93–1510	Arkla Energy Resources.	Transok Gas Co	12–04–92	G–S	25,000	N	F	12–01–92	Indef.
ST93–1511	Arkla Energy Resources.	Associated Natural Gas Inc.	12–04–92	G–S	120,000	N	F	12–01–92	Indef.
ST93–1512	Arkla Energy Resources.	Coastal Gas Marketing Co.	12–04–92	G–S	3,000	N	F	12–01–92	Indef.
ST93–1513	Channel Industries Gas Co.	Trunkline Gas Co	12–04–92	C	100,000	N	I	11–06–92	Indef.
ST93–1514	Kern River Gas Transmission Co.	Berry Petroleum Co	12–04–92	G–S	25,000	N	I	11–07–92	Indef.
ST93–1515	Tennessee Gas Pipeline Co.	Nashville Gas Co	12–04–92	B	10,000	N	F	11–17–92	Indef.
ST93–1516	Tennessee Gas Pipeline Co.	Amerada Hess Corp ...	12–04–92	G–S	100,000	N	I	11–04–92	Indef.
ST93–1517	Tennessee Gas Pipeline Co.	Middle Tennessee Gas Utility Dist.	12–04–92	G–S	40,000	N	I	11–20–92	Indef.
ST93–1518	Tennessee Gas Pipeline Co.	Citizens Gas Supply Corp.	12–04–92	G–S	3,200,000	N	I	11–06–92	Indef.

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ST93–1519	Northern Natural Gas Co.	Peoples Natural Gas Co., Utilitcorp.	12–04–92	G–S	6,000	N	F/I	11–18–92	03–31–93.
ST93–1520	Northern Natural Gas Co.	Peoples Natural Gas Co., Utilitcorp.	12–04–92	G–S	5,000	N	F/I	11–18–92	02–28–93
ST93–1521	Natural Gas P/L Co. of America.	Tenngasco Corp	12–04–92	G–S	50,000	N	I	11–04–92	Indef.
ST93–1522	Natural Gas P/L Co. of America.	Transok Gas Co	12–04–92	G–S	25,000	N	F	11–13–92	03–31–93.
ST93–1523	Natural Gas P/L Co. of America.	Equitable Resources Marketing Co.	12–04–92	G–S	500,000	N	I	10–09–92	Indef.
ST93–1524	Mid Louisiana Gas Co	Schuller Industries, Inc	12–07–92	B	6,000	N	I	11–05–92	10–31–93.
ST93–1525	Arkla Energy Resources.	Arkla Energy Marketing Co.	12–07–92	G–S	15,000	A	I	12–01–92	Indef.
ST93–1526	Acadian Gas Pipeline System.	United Gas Pipe Line Co.	12–07–92	C	15,300	N	I	11–09–92	Indef.
ST93–1527	Pontchartrain Natural Gas System.	Shell Gas Services Co	12–07–92	G–HT	15,300	N	I	11–09–92	Indef.
ST93–1528	ANR Pipeline Co	Polaris Pipeline Corp ..	12–07–92	G–S	1,500	N	I	11–12–92	Indef.
ST93–1529	ANR Pipeline Co	Reynolds Metals Co	12–07–92	G–S	1,300	N	I	11–16–92	Indef.
ST93–1530	ANR Pipeline Co	Cibola Corp	12–07–92	G–S	100,000	N	I	11–18–92	Indef.
ST93–1531	ANR Pipeline Co	Paris-Henry County Pub. Util. Dist.	12–07–92	G–S	614	A	F	11–11–92	10–31–93.
ST93–1532	Panhandle Eastern Pipe Line Co.	Central Illinois Public Service Co.	12–07–92	G–S	27,500	N	F	11–01–92	Indef.
ST93–1533	Panhandle Eastern Pipe Line Co.	Stand Energy Corp	12–07–92	G–S	150	N	F	11–12–92	Indef.
ST93–1534	Algonquin Gas Transmission Co.	Iroquois Gas Transmission System.	12–07–92	G–S	250,000	N	F	11–12–92	Indef.
ST93–1535	Algonquin Gas Transmission Co.	Distrigas of Massachusetts Corp.	12–07–92	G–S	10,200,000	N	I	11–15–92	Indef.
ST93–1536	Tennessee Gas Pipeline Co.	Access Energy Corp ...	12–07–92	G–S	500,000	N	I	11–21–92	Indef.
ST93–1537	Tennessee Gas Pipeline Co.	Virginia Natural Gas, Inc.	12–07–92	G–S	7,675	N	F	11–14–92	Indef.
ST93–1538	Tennessee Gas Pipeline Co.	Cogen Energy Technology, L.P.	12–07–92	G–S	950	N	F	11–14–92	Indef.
ST93–1539	Delhi Gas Pipeline Corp.	Natural Gas P/L Co. of America.	12–07–92	C	20,000	N	I	11–06–92	Indef.
ST93–1540	Enogex, Inc	Arkla Energy Resources.	12–07–92	C	50,000	N	I	11–01–92	Indef.
ST93–1541	Enogex, Inc	Northern Natural Gas Co.	12–07–92	C	50,000	N	I	11–26–92	Indef.
ST93–1542	Enogex, Inc	Northern Natural Gas Co.	12–07–92	C	10,000	N	I	11–19–92	Indef.
ST93–1543	Enogex, Inc	Natural Gas P/L Co. of America.	12–07–92	C	50,000	N	I	11–13–92	Indef.
ST93–1544	K N Energy, Inc	Mississippi River Trans. Corp.	12–07–92	G–S	1,500	N	I	10–04–92	Indef.
ST93–1545	Texas Gas Transmission Corp.	O & R Energy, Inc	12–07–92	G–S	20,000	Y	I	11–26–92	Indef.
ST93–1546	Texas Gas Transmission Corp.	Arco Natural Gas Marketing, Inc.	12–07–92	G–S	30,000	Y	I	11–18–92	Indef.
ST93–1547	Houston Pipe Line Co .	Transcontinental Gas P/L Corp.	12–07–92	C	50,000	N	I	11–03–92	Indef.
ST93–1548	Houston Pipe Line Co .	Black Marlin Pipeline Co.	12–07–92	C	50,000	N	I	11–01–92	Indef.
ST93–1549	Houston Pipe Line Co .	Northern Natural Gas Co.	12–07–92	C	100,000	N	I	11–01–92	Indef.
ST93–1550	Houston Pipe Line Co .	United Gas Pipe Line Co.	12–07–92	C	15,000	N	I	11–06–92	Indef.
ST93–1551	Houston Pipe Line Co .	United Gas Pipe Line Co.	12–07–92	C	50,000	N	I	11–14–92	Indef.
ST93–1552	Houston Pipe Line Co .	Seagull Interstate Corp	12–07–92	C	50,000	N	I	11–02–92	Indef.
ST93–1553	Houston Pipe Line Co .	Seagull Interstate Corp	12–07–92	C	50,000	N	I	11–01–92	Indef.
ST93–1554	Houston Pipe Line Co .	Texas Eastern Transmission Corp.	12–07–92	C	50,000	N	I	11–18–92	Indef.
ST93–1555	Houston Pipe Line Co .	Texas Eastern Transmission Corp.	12–07–92	C	20,000	N	I	11–07–92	Indef.
ST93–1556	Houston Pipe Line Co .	Texas Eastern Transmission Corp.	12–07–92	C	50,000	N	I	11–02–92	Indef.
ST93–1557	Houston Pipe Line Co .	Texas Eastern Transmission Corp.	12–07–92	C	25,000	N	I	11–04–92	Indef.
ST93–1558	Houston Pipe Line Co .	Tennessee Gas Pipeline Co.	12–07–92	C	50,000	N	I	11–11–92	Indef.
ST93–1559	Houston Pipe Line Co .	Tennessee Gas Pipeline Co.	12–07–92	C	60,000	N	I	11–12–92	Indef.
ST93–1560	Natural Gas P/L Co. of America.	Northern Indiana Public Service Co.	12–07–92	G–S	16,800	N	F	12–01–92	11–30–97.
ST93–1561	Natural Gas P/L Co. of America.	Polaris Corp	12–07–92	G–S	15,000	N	I	03–18–88	Indef.

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ST93-1562	Natural Gas P/L Co. of America.	Valero Gas Marketing, L.P.	12-07-92	G-S	10,000	N	F	12-01-92	12-31-92.
ST93-1563	Natural Gas P/L Co. of America.	Penford Products Co ...	12-07-92	G-S	5,000	N	F	12-01-92	11-30-93.
ST93-1564	Natural Gas P/L Co. of America.	Geo. A. Hormel & Co ..	12-07-92	G-S	1,150	N	F	12-01-92	11-30-93.
ST93-1565	Natural Gas P/L Co. of America.	Iowa Southern Utilities Co.	12-07-92	G-S	675	N	F	12-01-92	11-30-95.
ST93-1566	Natural Gas P/L Co. of America.	Illinois Power Co	12-07-92	G-S	1,095	N	F	12-01-92	11-30-95.
ST93-1567	Natural Gas P/L Co. of America.	Central Illinois Public Service Co.	12-07-92	G-S	640	N	F	12-01-92	11-30-95.
ST93-1568	Transcontinental Gas P/L Corp.	American Central Gas Cos., Inc.	12-07-92	G-S	10,365,000	N	I	11-24-92	Indef.
ST93-1569	Louisiana Resources Pipeline Co.	Stingray Pipeline Co ...	12-07-92	C	20,000	N	I	11-06-92	Indef.
ST93-1570	United Gas Pipe Line Co.	Ledco Inc	12-07-92	G-S	488,629	N	I	11-17-92	11-17-93.
ST93-1571	United Gas Pipe Line Co.	Delhi Gas Pipeline Corp.	12-07-92	G-S	104,800	N	I	11-19-92	11-19-93.
ST93-1572	United Gas Pipe Line Co.	Direct Gas Supply Corp.	12-07-92	G-S	5,240	N	I	11-17-92	11-17-93.
ST93-1573	Iroquois Gas Trans. System, L.P.	American Central Gas Cos., Inc.	12-07-92	G-S	576,000	N	I	11-25-92	Indef.
ST93-1574	Iroquois Gas Trans. System, L.P.	Central Hudson Gas & Electric Corp.	12-07-92	B	80,000	N	I	11-24-92	Indef.
ST93-1575	Iroquois Gas Trans. System, L.P.	Dartmouth Power Associates, L.P.	12-07-92	G-S	14,150	N	I	11-01-92	10-31-12.
ST93-1576	Tennessee Gas Pipeline Co.	Direct Gas Supply Corp.	12-08-92	G-S	51,550	N	I	11-19-92	Indef.
ST93-1577	CNG Transmission Corp.	Transport Gas, Inc	12-08-92	G-S	1,100	N	I	11-19-92	Indef.
ST93-1578	CNG Transmission Corp.	O & R Energy, Inc	12-08-92	G-S	100,000	N	I	11-13-92	Indef.
ST93-1579	CNG Transmission Corp.	O & R Energy, Inc	12-08-92	G-S	100,000	N	I	11-13-92	Indef.
ST93-1580	CNG Transmission Corp.	O & R Energy, Inc	12-08-92	G-S	100,000	N	I	11-13-92	Indef.
ST93-1581	CNG Transmission Corp.	O & R Energy, Inc	12-08-92	G-S	100,000	N	I	11-13-92	Indef.
ST93-1582	CNG Transmission Corp.	Transport Gas, Inc	12-08-92	G-S	1,100	N	I	11-19-92	Indef.
ST93-1583	CNG Transmission Corp.	Transport Gas, Inc	12-08-92	G-S	1,100	N	I	11-19-92	Indef.
ST93-1584	CNG Transmission Corp.	Transport Gas, Inc	12-08-92	G-S	1,100	N	I	11-19-92	Indef.
ST93-1585	CNG Transmission Corp.	O & R Energy, Inc	12-08-92	G-S	100,000	N	I	11-13-92	Indef.
ST93-1586	CNG Transmission Corp.	O&R Energy, Inc	12-08-92	G-S	100,000	N	I	11-13-92	Indef.
ST93-1587	CNG Transmission Corp.	O&R Energy, Inc	12-08-92	G-S	100,000	N	I	11-13-92	Indef.
ST93-1588	CNG Transmission Corp.	Virginia Natural Gas, Inc.	12-08-92	G-S	6,700	N	I	11-14-92	Indef.
ST93-1589	CNG Transmission Corp.	Virginia Natural Gas, Inc.	12-08-92	G-S	7,500	N	I	11-14-92	Indef.
ST93-1590	CNG Transmission Corp.	Virginia Natural Gas, Inc.	12-08-92	G-S	8,850	N	I	11-14-92	Indef.
ST93-1591	Williams Natural Gas Co.	Rangeline Corp	12-08-92	G-S	8,000	N	I	11-16-92	04-01-93.
ST93-1592	Natural Gas P/L Co. of America.	Phillips Petroleum Co ..	12-08-92	G-S	15,000	N	I	10-01-92	Indef.
ST93-1593	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12-08-92	G-S	250,000	A	I	11-25-92	Indef.
ST93-1594	Natural Gas P/L Co. of America.	North Shore Gas Co ...	12-08-92	G-S	5,000	N	F	12-01-92	11-30-95.
ST93-1595	Natural Gas P/L Co. of America.	Peoples Gas Light and Coke Co.	12-08-92	G-S	20,000	N	F	12-01-92	11-30-95.
ST93-1596	Natural Gas P/L Co. of America.	Northern Illinois Gas Co.	12-08-92	G-S	31,000	N	F	12-01-92	12-01-95.
ST93-1597	Natural Gas P/L Co. of America.	Northern Illinois Gas Co.	12-08-92	G-S	45,348	N	F	12-01-92	12-01-95.
ST93-1598	Columbia Gas Transmission Corp.	National Fuel Gas Supply Corp.	12-08-92	B-S	500	N	I	11-24-92	Indef.
ST93-1599	Columbia Gas Transmission Corp.	United States Gypsum—Gemco Plant.	12-08-92	G-S	50,000	Y	I	11-24-92	Indef.
ST93-1600	Florida Gas Transmission Co.	Florida Power Corp	12-08-92	G-S	4,000	N	I	11-06-92	11-05-93.
ST93-1601	Florida Gas Transmission Co.	Hadson Gas Systems, Inc.	12-08-92	G-S	100,000	N	I	11-01-92	Indef.

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ST93–1602	Texas Eastern Transmission Corp.	New England Power Co.	12–09–92	G–S	500,000	N	I	02–21–92	Indef.
ST93–1603	Texas Eastern Transmission Corp.	Equitable Gas Co	12–09–92	B	200,000	N	I	02–29–92	Indef.
ST93–1604	ANR Pipeline Co	Total Minatome Corp	12–09–92	G–S	30,000	N	I	11–14–92	Indef.
ST93–1605	ANR Pipeline Co	PPG Industries, Inc	12–09–92	G–S	300	N	F	11–20–92	11–30–93.
ST93–1606	ANR Pipeline Co	Enermax, Div. of Nukem, Inc.	12–09–92	G–S	40,000	N	I	11–20–92	Indef.
ST93–1607	ANR Pipeline Co	Transok Gas Co	12–09–92	G–S	50,000	N	I	11–21–92	Indef.
ST93–1608	ANR Pipeline Co	EMC Gas Transmission Co.	12–09–92	G–S	30,000	N	I	11–20–92	Indef.
ST93–1609	Northern Natural Gas Co.	Wisconsin Gas Co	12–09–92	G–S	565	N	F/I	11–12–92	Indef.
ST93–1610	Kern River Gas Transmission Co.	Meridian Oil Trading Inc.	12–09–92	G–S	100,000	N	I	11–09–92	Indef.
ST93–1611	Columbia Gulf Transmission Co.	Enron Gas Marketing, Inc.	12–09–92	G–S	130,000	N	I	11–21–92	Indef.
ST93–1612	Columbia Gulf Transmission Co.	Exxon Corp	12–09–92	G–S	30,000	N	I	11–20–92	Indef.
ST93–1613	Columbia Gulf Transmission Co.	Mid Louisiana Marketing Co.	12–09–92	G–S	5,000	N	I	12–02–92	Indef.
ST93–1614	Columbia Gulf Transmission Co.	Oryx Gas Marketing L.P.	12–09–92	G–S	70,000	N	I	11–25–92	Indef.
ST93–1615	Columbia Gulf Transmission Co.	Yuma Gas Corp	12–09–92	G–S	70,000	N	I	11–11–92	Indef.
ST93–1616	Columbia Gulf Transmission Co.	Citizens Gas Supply Corp.	12–09–92	G–S	40,000	N	I	12–03–92	Indef.
ST93–1617	Columbia Gulf Transmission Co.	Mobil Natural Gas Inc	12–09–92	G–S	60,000	N	I	11–24–92	Indef.
ST93–1618	Columbia Gulf Transmission Co.	Neste Trading (USA) Inc.	12–09–92	G–S	300,000	N	I	11–12–92	Indef.
ST93–1619	Columbia Gulf Transmission Co.	Torch Gas, L.C	12–09–92	G–S	75,000	N	I	12–01–92	Indef.
ST93–1620	Columbia Gas Transmission Corp.	River Gas Co	12–10–92	G–S	10,000	Y	I	12–01–92	Indef.
ST93–1621	Columbia Gas Transmission Corp.	Columbia Gas of Kentucky, Inc.	12–10–92	G–S	14,640	Y	F	12–01–92	02–28–93.
ST93–1622	Columbia Gas Transmission Corp.	Honda of America Manufacturing.	12–10–92	G–S	5,000	Y	F	12–01–92	03–31–93.
ST93–1623	Columbia Gas Transmission Corp.	Entrade Corp	12–10–92	G–S	1,000	Y	F	12–01–92	03–31–93.
ST93–1624	Columbia Gas Transmission Corp.	Entrade Corp	12–10–92	G–S	2,500	Y	F	12–01–92	03–31–93.
ST93–1625	Columbia Gas Transmission Corp.	NGO Development Corp.	12–10–92	G–S	5,000	Y	F	12–01–92	03–31–93.
ST93–1626	Columbia Gas Transmission Corp.	Ford Motor Co	12–10–92	G–S	1,500	Y	I	12–01–92	Indef.
ST93–1627	Transok Gas Transmission Co.	ANR Pipeline Co., et al	12–10–92	C	50,000	Y	I	12–01–92	Indef.
ST93–1628	Colorado Interstate Gas Co.	Associated Interstate Pipeline Co.	12–10–92	G–S	39,820	N	I	11–13–92	Indef.
ST93–1629	Arida Energy Resources.	Torch Gas, L. C	12–10–92	G–S	75,000	N	I	11–15–92	Indef.
ST93–1630	Enogex Inc	Panhandle Eastern Pipeline Co.	12–10–92	C	50,000	N	I	12–01–92	Indef.
ST93–1631	Natural Gas P/L Co. of America.	Transok Gas Co	12–10–92	G–S	50,000	N	I	10–01–92	Indef.
ST93–1632	Tennessee Gas Pipeline Co.	City of Holyoke Gas & Elect. Dept.	12–10–92	G–S	685	N	F	11–14–92	Indef.
ST93–1633	Tennessee Gas Pipeline Co.	Piedmont Natural Gas Co.	12–10–92	B	10,000	N	F	11–14–92	11–01–00.
ST93–1634	Tennessee Gas Pipeline Co.	Louis Dreyfus Energy Corp.	12–10–92	G–S	16,800	N	F	11–14–92	11–01–93.
ST93–1635	United Gas Pipe Line Co.	Rally Pipeline Corp	12–10–92	G–S	59,736	N	I	12–03–92	04–02–93.
ST93–1636	United Gas Pipe Line Co.	Enermax, Div. Nukem, Inc.	12–10–92	G–S	104,800	N	I	11–30–92	03–30–93.
ST93–1637	United Gas Pipe Line Co.	Citizens Gas Supply Corp.	12–10–92	G–S	20,960	N	I	12–03–92	04–02–93.
ST93–1638	United Gas Pipe Line Co.	Shell Gas Trading Co	12–10–92	G–S	209,600	N	I	12–02–92	04–01–93.
ST93–1639	Lone Star Gas Co	Tennessee Gas Pipeline Co.	12–11–92	C	30,000	N	I	12–02–92	04–01–93.
ST93–1640	Peoples Natural Gas Co.	CNG Transmission Corp.	12–11–92	C	4,093	Y	I	11–13–92	11–30–92.
ST93–1641	Corpus Christi Transmission Co.	Texas Eastern Transmission Co.	12–11–92	C	15,000	N	I	01–01–92	Indef.
ST93–1642	El Paso Natural Gas Co.	Nevada Cogeneration Associates #1.	12–11–92	G–S	30,900	N	I	11–11–92	Indef.
ST93–1643	El Paso Natural Gas Co.	Nevada Cogeneration Associates #2.	12–11–92	G–S	30,900	N	I	11–11–92	Indef.

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ST93-1644	El Paso Natural Gas Co.	Amoco Energy Trading Corp.	12-11-92	G-S	10,300	N	I	11-11-92	Indef.
ST93-1645	El Paso Natural Gas Co.	Hadson Gas Systems, Inc.	12-11-92	G-S	10,000	N	I	11-27-92	Indef.
ST93-1646	El Paso Natural Gas Co.	Belvan Corp	12-11-92	G-S	11,845	N	I	11-14-92	11-30-92.
ST93-1647	Williston Basin Inter. P/L Co.	Rainbow Gas Co	12-11-92	G-S	304,447	A	I	11-27-92	07-31-94.
ST93-1648	Texas Eastern Transmission Corp.	Texas Southeastern Gas Co.	12-11-92	B	15,000	N	I	11-13-92	Indef.
ST93-1649	Texas Eastern Transmission Corp.	Gastantic Corp	12-11-92	G-S	30,000	N	I	11-25-92	Indef.
ST93-1650	Transcontinental Gas P/L Corp.	Gasmark, Ltd	12-11-92	G-S	1,093,000	N	I	11-25-92	Indef.
ST93-1651	Transcontinental Gas P/L Corp.	Texaco Gas Marketing, Inc.	12-11-92	G-S	4,516,425	N	I	12-04-92	Indef.
ST93-1652	Northern Natural Gas Co.	Wisconsin Power and Light Co.	12-11-92	G-S	5,800	N	F/I	11-15-92	Indef.
ST93-1653	Northern Natural Gas Co.	Koch Hydrocarbon Co .	12-11-92	G-S	35,000	N	F/I	11-19-92	01-10-12.
ST93-1654	Natural Gas P/L Co. of America.	Bridgegas U.S.A. Inc ...	12-11-92	G-S	200,000	N	I	11-19-92	Indef.
ST93-1655	Natural Gas P/L Co. of America.	Midwest Power Systems, Inc.	12-11-92	B	1,833	N	F	12-01-92	11-30-95.
ST93-1656	Natural Gas P/L Co. of America.	Oryx Gas Marketing L.P.	12-11-92	G-S	17,500	N	F	12-01-92	01-31-93.
ST93-1657	Natural Gas P/L Co. of America.	United Cities Gas Co ..	12-11-92	G-S	4,550	N	F	12-01-92	11-30-95.
ST93-1658	Natural Gas P/L Co. of America.	Enron Gas Marketing, Inc.	12-11-92	G-S	25,000	N	F	12-01-92	02-28-93.
ST93-1659	Natural Gas P/L Co. of America.	Aquila Energy Marketing Corp.	12-11-92	G-S	30,000	N	F	12-01-92	12-31-92.
ST93-1660	Natural Gas P/L Co. of America.	North Shore Gas Co ...	12-11-92	G-S	4,000	N	F	12-01-92	11-30-95.
ST93-1661	Sabine Pipe Line Co ...	Eastex Hydrocarbons, Inc.	12-14-92	G-S	50,000	N	I	11-20-92	Indef.
ST93-1662	Questar Pipeline Co	Colorado Interstate Gas Co.	12-14-92	G	150,000	N	I	11-12-92	Indef.
ST93-1663	Rocky Mountain Natural Gas Co.	Northwest Pipeline Corp.	12-14-92	G-HT	5,000	N	I	05-05-92	Indef.
ST93-1664	Transok, Inc	Arida Energy Resources.	12-14-92	C	50,000	N	I	12-01-92	Indef.
ST93-1665	Kern River Gas Transmission Co.	Redwood Resources, Inc.	12-14-92	G-S	50,000	N	I	11-15-92	Indef.
ST93-1666	Tennessee Gas Pipeline Co.	CNG Transmission Corp.	12-14-92	G-S	32,431	N	F	11-19-92	Indef.
ST93-1667	Tennessee Gas Pipeline Co.	Coastal Gas Marketing Co.	12-14-92	G-S	6,700	N	F	11-21-92	03-31-93.
ST93-1668	Tennessee Gas Pipeline Co.	Berkshire Gas Co	12-14-92	B	15,000	N	I	11-13-92	Indef.
ST93-1669	Tennessee Gas Pipeline Co.	Nycotex Gas Transport	12-14-92	B	10,000	N	F	11-14-92	Indef.
ST93-1670	Transok, Inc	Arida Energy Resources.	12-14-92	C	50,000	N	I	12-01-92	Indef.
ST93-1671	Monterey Pipeline Co ..	United Gas Pipe Line Co.	12-14-92	C	20,000	N	I	10-09-92	Indef.
ST93-1672	Monterey Pipeline Co ..	Columbia Gulf Transmission Co.	12-14-92	C	20,000	N	I	11-01-92	Indef.
ST93-1673	Monterey Pipeline Co ..	ANR Pipeline Co	12-14-92	C	20,000	N	I	05-01-90	Indef.
ST93-1674	Monterey Pipeline Co ..	Trunkline Gas Co	12-14-92	C	20,000	N	I	03-01-90	Indef.
ST93-1675	Panhandle Eastern Pipe Line Co.	Stand Energy Corp	12-14-92	G-S	225	N	I	11-12-92	Indef.
ST93-1676	Arida Energy Resources.	American Central Gas Cos., Inc.	12-14-92	G-S	10,000	N	F	012-01-92	Indef.
ST93-1677	Gastel Pipeline System Inc.	Amerada Hess Corp ...	12-11-92	G-S	25,350	N	I	11-04-92	Indef.
ST93-1678	Louisiana Intrastate Gas Corp.	ANR Pipeline Co., ET AL.	12-14-92	C	60,000	N	I	12-01-92	Indef.
ST93-1679	National Fuel Gas Supply Corp.	Connecticut Natural Gas Corp.	12-14-92	G-S	5,300	N	F/I	11-01-91	02-29-92.
ST93-1680	Northern Natural Gas Co.	Northwestern Public Service Co.	12-14-92	B	950	N	F	05-31-92	05-31-93.
ST93-1681	Northern Natural Gas Co.	Centran Corp	12-14-92	G-S	50,000	N	F/I	11-01-92	Indef.
ST93-1682	Texas Gas Transmission Corp.	City of South Fulton	12-14-92	G-S	1,678	N	I	12-01-92	Indef.
ST93-1683	Texas Gas Transmission Corp.	City of Drakesboro	12-14-92	G-S	1,547	N	I	12-01-92	Indef.
ST93-1684	Texas Gas Transmission Corp.	Commonwealth Energy Services.	12-14-92	G-S	10,000	N	I	12-01-92	Indef.

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ST93–1685	Texas Gas Transmission Corp.	Amerada Hess Corp ...	12–14–92	G–S	100,000	N	I	12–04–92	Indef.
ST93–1686	Tennessee Gas Pipeline Co.	Mississippi Valley Gas Co.	12–15–92	B	50,000	N	I	11–21–92	Indef.
ST93–1687	Tennessee Gas Pipeline Co.	Mid Texas Natural Gas	12–15–92	G–S	400	N	I	12–01–92	Indef.
ST93–1688	Montana Power Co	Colorado Interstate Gas Co.	12–15–92	G–HT	20,000	N	I	09–01–92	10–31–02.
ST93–1689	Montana Power Co	Colorado Interstate Gas Co.	12–15–92	G–HT	30,000	N	I	09–01–92	10–31–02.
ST93–1690	Florida Gas Transmission Co.	Mobil Natural Gas, Inc	12–15–92	G–S	100,000	N	I	12–01–92	Indef.
ST93–1691	Columbia Gas Transmission Corp.	Stand Energy Corp	12–15–92	G–S	30	A	F	11–15–92	03–31–93.
ST93–1692	Natural Gas P/L Co. of America.	City of Nashville	12–15–92	B	750	N	F	12–01–92	02–28–97.
ST93–1693	Phillips Gas Pipeline Co.	Phillips Texas Border Pipeline Co.	12–15–92	B	25,000	Y	F	01–01–89	12–31–94.
ST93–1694	Phillips Gas Pipeline Co.	Phillips Texas Border Pipeline Co.	12–15–92	B	10,000	Y	I	12–01–87	Indef.
ST93–1695	K N Energy, Inc	Nebraska Public Gas Agency.	12–16–92	G–S	35,000	N	I	11–20–92	Indef.
ST93–1696	K N Energy, Inc	Western Gas Resources, Inc.	12–16–92	G–S	25,000	N	I	08–01–92	Indef.
ST93–1697	TransTexas Pipeline ...	Florida Gas Transmission Co.	12–16–92	C	5,000	N	I	12–01–92	Indef.
ST93–1698	TransTexas Pipeline ...	Natural Gas P/L Co. of America.	12–16–92	C	10,000	N	I	12–01–92	Indef.
ST93–1699	TransTexas Pipeline ...	Texas Gas Transmission Corp.	12–16–92	C	15,000	N	I	12–01–92	Indef.
ST93–1700	Valero Transmission, L.P.	Texas Eastern Transmission Corp.	12–16–92	C	20,000	N	I	11–01–92	Indef.
ST93–1701	Valero Transmission, L.P.	Tennessee gas Pipeline Co.	12–16–92	C	3,000	N	I	12–01–92	Indef.
ST93–1702	Valero Transmission, L.P.	Texas Gas Transmission Corp.	12–16–92	C	15,000	N	I	12–01–92	Indef.
ST93–1703	Valero Transmission, L.P.	United Gas Pipe Line Co.	12–16–92	C	12,000	N	I	11–01–92	Indef.
ST93–1704	Tennessee Gas Pipeline Co.	Stellar Gas Co	12–16–92	G–S	1,000,000	N	I	11–19–92	Indef.
ST93–1705	Tennessee Gas Pipeline Co.	Scana hydrocarbons, Inc.	12–16–92	G–S	50,000	N	I	11–26–92	Indef.
ST93–1706	Tennessee Gas Pipeline Co.	City of Holyoke Gas & Elect. Dept.	12–16–92	G–S	18,250,000	N	I	11–21–92	Indef.
ST93–1707	Channel Industries Gas Co.	Tennessee Gas pipeline Co.	12–16–92	C	200,000	Y	I	11–20–92	Indef.
ST93–1708	Sabine Pipe Line Co ...	Stellar Gas Co	12–16–92	G–S	100,000	N	I	12–03–92	Indef.
ST93–1709	Texas Eastern Transmission Corp.	Mt. Carmel Public Utility.	12–16–92	B	50,000	N	I	12–03–92	Indef.
ST93–1710	Texas Eastern Transmission Corp.	Midcon Marketing Corp	12–16–92	G–S	50,000	N	I	12–03–92	Indef.
ST93–1711	Texas Eastern Transmission Corp.	Monterey Pipeline Co ..	12–16–92	B	70,000	N	I	12–05–92	Indef.
ST93–1712	Texas Eastern Transmission Corp.	Global Petroleum Corp	12–16–92	G–S	75,000	N	I	12–01–92	Indef.
ST93–1713	Trunkline Gas Co	Panhandle Trading Co	12–16–92	G–S	50,000	Y	I	12–01–92	Indef.
ST93–1714	Trunkline Gas Co	Coastal Gas Marketing Co.	12–16–92	G–S	100,000	N	I	12–01–92	Indef.
ST93–1715	Trunkline Gas Co	Polaris Pipeline Corp ..	12–16–92	G–S	75,000	N	I	12–01–92	Indef.
ST93–1716	Trunkline Gas Co	Suburban Natural Gas Co.	12–16–92	G–S	1,024	N	I	12–01–92	Indef.
ST93–1717	Trunkline Gas Co	Fuel Services Group, Inc.	12–16–92	G–S	11,000	N	I	12–01–92	Indef.
ST93–1718	Trunkline Gas Co	Centran Corp	12–16–92	G–S	30,000	N	I	12–01–92	Indef.
ST93–1719	Trunkline Gas Co	American Central Gas Cos., Inc.	12–16–92	G–S	10,000	N	F	12–01–92	Indef.
ST93–1720	Natural Gas P/L Co. of America.	Iowa-Illinois Gas & Elect. Co.	12–16–92	B	5,000	N	I	12–15–92	03–31–93.
ST93–1721	Columbia Gas Transmission Corp.	Columbia Gas of Maryland, Inc.	12–16–92	G–S	3,500	Y	F	12–01–92	02–28–93.
ST93–1722	Columbia Gas Transmission Corp.	Braxton Oil and Gas Corp.	12–16–92	G–S	1,568	N	F	12–01–92	Indef.
ST93–1723	Columbia Gas Transmission Corp.	SGS Gas Purchasing Co.	12–16–92	G–S	3,000	N	I	12–01–92	Indef.
ST93–1724	Columbia Gas Transmission Corp.	Suburban Natural Gas Co.	12–16–92	B	1,800	N	I	12–01–92	10–31–93.
ST93–1725	Texas Gas Transmission Corp.	Texaco Gas Marketing, Inc.	12–16–92	G–S	830	N	I	12–01–92	Indef.
ST93–1726	Texas Gas Transmission Corp.	Coastal Gas Marketing Co.	12–16–92	G–S	20,000	N	I	12–01–92	Indef.

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ST93–1727	Texas Gas Transmission Corp.	Enron Gas Marketing, Inc.	12–16–92	G–S	100,000	Y	I	12–01–92	Indef.
ST93–1729	National Fuel Gas Supply Corp.	United Gas Gypsum Co.	12–16–92	B	10,000	N	I	11–02–92	10–31–12.
ST93–1730	National Fuel Gas Supply Corp.	United Gas Gypsum Co.	12–16–92	B	10,000	N	I	11–02–92	10–31–12.
ST93–1731	National Fuel Gas Supply Corp.	Media Power Co	12–16–92	B	5,000	N	I	12–04–92	11–30–12.
ST93–1732	National Fuel Gas Supply Corp.	Mark Resources Corp .	12–16–92	G–S	5,000	N	I	11–01–92	10–31–12.
ST93–1733	Texas Eastern Transmission Corp.	Columbia Gas of Pennsylvania.	12–17–92	B	2,485,630	N	I	12–01–92	Indef.
ST93–1734	Texas Eastern Transmission Corp.	Samedan Oil Corp	12–17–92	G–S	300,000	N	I	12–01–92	Indef.
ST93–1735	Tennessee Gas Pipeline Co.	New York State Electric and Gas.	12–17–92	G–S	5,117	N	F	12–02–92	10–31–93.
ST93–1736	Tennessee Gas Pipeline Co.	Shell Gas Trading Co .	12–17–92	G–S	500,000	N	I	11–20–92	Indef.
ST93–1737	Tennessee Gas Pipeline Co.	Entrade Corp	12–17–92	G–S	4,300	N	I	12–01–92	02–28–93.
ST93–1738	ONG Transmission Co	Panhandle Eastern Pipe Line Co.	12–17–92	C	50,000	N	I	11–24–92	Indef.
ST93–1739	Transcontinental Gas P/L Corp.	Western Gas Resources.	12–17–92	G–S	60,000	A	I	12–04–92	Indef.
ST93–1740	Transcontinental Gas P/L Corp.	Nortech Energy Corp ..	12–17–92	G–S	150,000	N	I	12–01–92	Indef.
ST93–1741	Transcontinental Gas P/L Corp.	Morgan Stanley Capital Group, Inc.	12–17–92	G–S	620,000	A	I	12–01–92	Indef.
ST93–1742	Transcontinental Gas P/L Corp.	Public Service Electric & Gas Co.	12–17–92	B	11,515,192	N	I	12–08–92	Indef.
ST93–1743	Transcontinental Gas P/L Corp.	Health Petra Resources, Inc.	12–18–92	G–S	840,000	N	I	12–09–92	Indef.
ST93–1744	Natural Gas P/L Co. of America.	Sioux Pointe Inc	12–17–92	G–S	50,000	N	I	12–01–92	Indef.
ST93–1745	Natural Gas P/L Co. of America.	United Texas Trans. Co.	12–17–92	B	200,000	N	I	12–04–92	Indef.
ST93–1746	Natural Gas P/L Co. of America.	Signal Fuels Trading Corp.	12–17–92	G–S	200	N	I	12–04–92	Indef.
ST93–1747	Natural Gas P/L Co. of America.	Brooklyn Interstate Nat. Gas Corp.	12–17–92	G–S	50,000	N	I	11–26–92	Indef.
ST93–1748	Natural Gas P/L Co. of America.	North Canadian Marketing.	12–17–92	G–S	150,000	N	I	11–01–92	Indef.
ST93–1749	Alabama-Tennessee Nat. Gas Co.	Gasmark, Ltd	12–17–92	G–S	50,000	N	I	11–20–92	02–28–93.
ST93–1750	Westar Transmission Co.	El Paso Natural Gas Co.	12–18–92	C	10,000	N	I	11–01–92	Indef.
ST93–1751	Phillips Gas Pipeline Co.	Anadarko Trading Co ..	12–17–92	B	50,000	A	I	10–01–92	Indef.
ST93–1752	Delhi Gas Pipeline Corp.	Williams Natural Gas Co.	12–18–92	C	2,000	N	I	11–19–92	Indef.
ST93–1753	Algonquin Gas Transmission Co.	Consolidated Edison Co. of New York.	12–18–92	G–S	150,000	N	I	11–25–92	Indef.
ST93–1754	Algonquin Gas Transmission Co.	New England Power Co.	12–18–92	G–S	700,000	N	I	11–20–92	Indef.
ST93–1755	Algonquin Gas Transmission Co.	Southern Connecticut Gas Co.	12–18–92	G–S	79,000	N	I	11–25–92	Indef.
ST93–1756	Algonquin Gas Transmission Co.	Narragansett Electric Co.	12–18–92	G–S	150,000	N	I	11–20–92	Indef.
ST93–1757	Algonquin Gas Transmission Co.	Town of Middleborough	12–18–92	G–S	100,000	N	I	11–21–92	Indef.
ST93–1758	Algonquin Gas Transmission Co.	Providence Gas Co	12–18–92	G–S	100,000	N	I	11–20–92	Indef.
ST93–1759	Algonquin Gas Transmission Co.	Distrigas of Massachusetts Corp.	12–18–92	G	3,000	N	F	12–01–92	02–28–93.
ST93–1760	Algonquin Gas Transmission Co.	Distrigas of Massachusetts Corp.	12–18–92	G–S	10,200,000	N	I	11–21–92	Indef.
ST93–1761	Algonquin Gas Transmission Co.	Boston Gas Co	12–18–92	G–S	150,000	N	I	11–30–92	Indef.
ST93–1762	Kern River Gas Transmission Co.	Union Pacific Fuels, Inc.	12–18–92	G–S	100,000	N	F	12–01–92	Indef.
ST93–1763	Tennessee Gas Pipeline Co.	Rochester Gas & Electric Corp.	12–18–92	B	35,000	N	I	12–01–92	Indef.
ST93–1764	Tennessee Gas Pipeline Co.	Stellar Gas Co	12–18–92	G–S	10,000	N	I	12–01–92	Indef.
ST93–1765	Tennessee Gas Pipeline Co.	Midcoast Venture 1, a Joint Venture.	12–18–92	B	1,200	N	I	11–26–92	Indef.
ST93–1766	Tennessee Gas Pipeline Co.	National Fuel Gas Supply Corp.	12–18–92	B	15,000	N	I	12–01–92	03–01–93.
ST93–1767	Tennessee Gas Pipeline Co.	Distrigas of Massachusetts Corp.	12–18–92	G	110,000	N	I	12–02–92	Indef.
ST93–1768	Olympic Pipeline Co ..	ANR Pipeline Corp	12–18–92	C	50,000	N	I	12–10–91	Indef.

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ST93–1769	Olympic Pipeline Co	Sabine Pipeline Co	12–18–92	C	10,000	N	I	10–07–92	Indef.
ST93–1770	Olympic Pipeline Co	Sabine Pipeline Co	12–18–92	C	100,000	N	I	10–28–92	Indef.
ST93–1771	Olympic Pipeline Co	Sabine Pipeline Co	12–18–92	C	30,000	N	I	08–25–92	Indef.
ST93–1772	Olympic Pipeline Co	Natural Gas P/L Co. of America.	12–18–92	C	50,000	N	I	09–05–92	Indef.
ST93–1773	Olympic Pipeline Co	Sabine Pipeline Co	12–18–92	C	10,000	N	I	10–01–92	Indef.
ST93–1774	Northern Border Pipeline Co.	Western Natural Gas Trans. Corp.	12–18–92	G–S	25,000	N	I	12–01–92	11–30–94.
ST93–1775	ANR Pipeline Co	Michigan Consolidated Gas Co.	12–18–92	G–S	275,000	N	I	12–01–92	10–31–93.
ST93–1776	ANR Pipeline Co	NGC Transportation, Inc.	12–18–92	G–S	100,000	N	I	12–02–92	Indef.
ST93–1777	ANR Pipeline Co	Northwestern Mutual Life Ins. Co.	12–18–92	G–S	100,000	N	I	12–01–92	Indef.
ST93–1778	ANR Pipeline Co	Mobil Natural Gas Inc .	12–18–92	G–S	100,000	N	I	12–01–92	Indef.
ST93–1779	Williams Natural Gas Co.	Brock Gas Systems & Equipment.	12–18–92	G–S	150	N	I	12–01–92	03–01–93.
ST93–1780	Williams Natural Gas Co.	Vesta Energy Co	12–18–92	G–S	6,795	N	I	12–01–92	03–01–93.
ST93–1781	Williams Natural Gas Co.	Rangeline Corp	12–18–92	G–S	3,927	N	I	12–01–92	03–01–93.
ST93–1782	Williams Natural Gas Co.	Energy Dynamics, Inc .	12–18–92	G–S	1,060	N	I	12–01–92	03–01–93.
ST93–1783	Williams Natural Gas Co.	Certainteed Corp	12–18–92	G–S	2,000	N	I	12–02–92	04–01–93.
ST93–1784	Transwestern Pipeline Co.	Coastal Gas Marketing Co.	12–18–92	G–S	100,000	N	I	12–01–92	Indef.
ST93–1785	Transwestern Pipeline Co.	Pacific Gas and Electric Co.	12–18–92	G–S	500,000	N	I	11–01–92	Indef.
ST93–1786	Transwestern Pipeline Co.	Pacific Gas and Electric Co.	12–18–92	G–S	300,000	N	I	11–01–92	Indef.
ST93–1787	Transwestern Pipeline Co.	Meridian Oil Trading, Inc.	12–18–92	G–S	300,000	N	I	12–01–92	Indef.
ST93–1788	Transwestern Pipeline Co.	Enron Gas Marketing, Inc.	12–18–92	G–S	200,000	A	I	12–01–92	Indef.
ST93–1789	Northern Natural Gas Co.	City of Duluth	12–18–92	G–S	1,000	N	F/I	11–01–92	Indef.
ST93–1790	Northern Natural Gas Co.	KN Energy, Inc	12–18–92	G–S	83	N	F/I	11–01–92	Indef.
ST93–1791	Northern Natural Gas Co.	Texaco Gas Marketing, Inc.	12–18–92	G–S	50,000	N	F/I	11–01–92	Indef.
ST93–1792	Northern Natural Gas Co.	Amoco Energy Trading Corp.	12–18–92	G–S	100,000	N	F/I	10–28–92	Indef.
ST93–1793	Northern Natural Gas Co.	Chevron USA Inc	12–18–92	G–S	20,000	N	F/I	11–01–92	Indef.
ST93–1794	Northern Natural Gas Co.	Ameranda Hess Corp .	12–18–92	G–S	10,000	N	F/I	11–04–92	Indef.
ST93–1795	Stingray Pipeline Co ...	Seneca Resources Corp.	12–18–92	K–S	50,000	N	I	12–01–92	Indef.
ST93–1796	Moraine Pipeline Co	Wisconsin Natural Gas Co.	12–18–92	B	12,000	Y	F	11–18–92	11–17–02.
ST93–1797	Natural Gas P/L Co. of America.	Northern Illinois Gas Co.	12–18–92	B	99,500	N	F	12–01–92	11–30–95.
ST93–1798	Natural Gas P/L Co. of America.	Aquila Energy Marketing Corp.	12–18–92	G–S	150,000	N	I	12–03–92	Indef.
ST93–1799	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12–18–92	G–S	50,000	A	F	12–01–92	03–31–93.
ST93–1800	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12–18–92	G–S	25,000	A	F	12–01–92	01–31–93.
ST93–1801	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12–18–92	G–S	100,000	N	I	11–23–92	Indef.
ST93–1802	Natural Gas P/L Co. of America.	Associated Natural Gas, Inc.	12–18–92	G–S	2,000	N	F	12–01–92	02–28–93.
ST93–1803	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12–18–92	G–S	25,000	A	I	12–01–92	01–31–93.
ST93–1804	Natural Gas P/L Co. of America.	Wisconsin Natural Gas Co..	12–18–92	B	12,000	N	F	11–18–92	11–17–02.
ST93–1805	Panhandle Eastern Pipe Line Co.	National Steel Corp	12–18–92	G–S	20,000	N	I	12–01–92	Indef.
ST93–1806	Panhandle Eastern Pipe Line Co.	Louis Dreyfus Energy Corp.	12–18–92	G–S	50,000	N	I	12–01–92	Indef.
ST93–1807	Panhandle Eastern Pipe Line Co.	Walnut Ridge Health Care.	12–18–92	G–S	35	N	I	12–02–92	Indef.
ST93–1808	Panhandle Eastern Pipe Line Co.	Illinois Power Co	12–18–92	G–S	18,709	N	I	12–01–92	Indef.
ST93–1809	Panhandle Eastern Pipe Line Co.	Fidelity Natural Gas, Inc.	12–18–92	G–S	1,026	N	I	12–01–92	Indef.
ST93–1810	Panhandle Eastern Pipe Line Co.	Suburban Natural Gas Co.	12–18–92	G–S	1,029	N	I	12–01–92	Indef.
ST93–1811	Panhandle Eastern Pipe Line Co	Tarpon Gas Marketing Ltd.	12–18–92	G–S	7,300,000	N	I	12–01–92	Indef.

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ST93-1812	Gateway Pipeline Co ..	Yuma Gas Corp	12-18-92	G-S	75,000	N	I	12-09-92	04-08-93.
ST93-1813	Gateway Pipeline Co ..	Catex Energy Inc	12-18-92	G-S	100,000	N	I	12-01-92	03-31-93.
ST93-1814	United Gas Pipe Line Co.	Mobil Natural Gas Inc .	12-18-92	G-S	52,400	N	I	12-10-92	04-09-93.
ST93-1815	United Gas Pipe Line Co.	Seagull Marketing Services, Inc.	12-18-92	G-S	524,000	N	I	12-07-92	04-06-93.
ST93-1816	Northern Border Pipeline Co.	Suncor Inc	12-18-92	G-S	25,000	N	I	12-01-92	12-01-93.
ST93-1817	United Gas Pipe Line Co.	Mississippi Valley Gas Co.	12-18-92	G-S	10,000	N	F	12-01-92	03-31-93.
ST93-1818	United Gas Pipe Line Co.	Western Gas Resources, Inc.	12-18-92	G-S	71,500	N	F	12-01-92	03-31-93.
ST93-1819	United Gas Pipe Line Co.	Catex Energy Inc	12-18-92	G-S	100,000	N	I	12-01-92	03-31-93.
ST93-1820	United Gas Pipe Line Co.	Louis Dreyfus Energy Corp.	12-18-92	G-S	100,000	N	I	12-01-92	03-31-93.
ST93-1821	United Gas Pipe Line Co.	FEC Marketing, Inc	12-18-92	G-S	3,000	N	F	12-01-92	03-31-93
ST93-1822	United Gas Pipe Line Co.	Entex, Division of Arkla, Inc.	12-18-92	G-S	10,000	N	I	11-21-92	03-21-93
ST93-1823	United Gas Pipe Line Co.	Bay-Tech Operating Co., Inc.	12-18-92	G-S	1,153	N	I	11-21-92	03-21-93.
ST93-1824	United Gas Pipe Line Co.	Chevron U.S.A. Inc	12-18-92	G-S	104,800	N	I	12-10-92	04-09-93
ST93-1825	United Gas Pipe Line Co.	Aquila Energy Marketing Corp.	12-18-92	G-S	52,400	N	I	12-10-92	04-09-93.
ST93-1826	United Gas Pipe Line Co.	Arkla Energy Marketing Co.	12-18-92	G-S	20,960	N	I	12-07-92	04-06-93.
ST93-1827	United Gas Pipe Line Co.	Endevco Oil & Gas Co	12-18-92	G-S	26,200	N	I	12-10-92	04-09-93.
ST93-1828	United Gas Pipe Line Co.	Endevco Gas Marketing, Inc.	12-18-92	G-S	524,000	N	I	12-07-92	04-06-93.
ST93-1829	United Gas Pipe Line Co.	FEC Marketing, Inc	12-18-92	G-S	10,000	N	I	12-10-92	04-09-93.
ST93-1830	K N Energy, Inc	K N Gas Marketing, Inc	12-21-92	G-S	5,000	A	F	11-17-92	Indef.
ST93-1831	Texas Gas Corp	Texas Eastern Transmission Corp.	12-21-92	C	6,500	N	I	09-01-92	Indef.
ST93-1832	Valero Transmission, L.P.	Trunkline Gas Co	12-21-92	C	5,000	N	I	12-01-92	Indef.
ST93-1833	Brooklyn Union Gas Co.	Municipal Gas Authority of Georgia.	12-21-92	G-HT	4,900	N	I	12-06-92	03-31-93.
ST93-1834	Gulf Energy Pipeline Co.	Tennessee Gas Pipeline Co.	12-21-92	C	5,000	N	I	12-01-92	Indef.
ST93-1835	Gulf Energy Pipeline Co.	Trunkline Gas Co	12-21-92	C	10,000	N	I	12-03-92	Indef.
ST93-1836	Williams Natural Gas Co.	Coastal Gas Marketing Co.	12-21-92	G-S	3,000	N	F	12-01-92	03-01-93.
ST93-1837	Williams Natural Gas Co.	City of Iola	12-21-92	G-S	5,100	N	F	12-01-92	04-01-93.
ST93-1838	Williams Natural Gas Co.	Nimrod Natural Gas Corp.	12-21-92	G-S	640	N	F	12-01-92	11-01-93.
ST93-1839	Northern Natural Gas Co.	Peoples Natural Gas Co.	12-21-92	G-S	77,122	N	F/I	12-01-92	02-28-93.
ST93-1840	Northern Natural Gas Co.	Iowa Southern Utilities Co.	12-21-92	G-S	525	N	F/I	12-01-92	Indef.
ST93-1841	Northern Natural Gas Co.	City of Duluth	12-21-92	G-S	1,000	N	F/I	12-01-92	Indef.
ST93-1842	Northern Natural Gas Co.	GPM Gas Corp	12-21-92	G-S	100,000	N	F/I	11-01-92	Indef.
ST93-1843	Transok, Inc	Arkla Energy Resources.	12-21-92	C	5,000	N	I	12-04-92	Indef.
ST93-1844	Transok, Inc	ANR Pipeline Co	12-21-92	C	10,000	N	I	12-08-92	Indef.
ST93-1845	Transok, Inc	Williams Natural Gas Co.	12-21-92	C	15,000	N	I	12-08-92	Indef.
ST93-1846	Transok, Inc	Williams Natural Gas Co.	12-21-92	C	50,000	N	I	12-04-92	Indef.
ST93-1847	Transok Gas Transmission Co.	ANR Pipeline Co., ET AL.	12-21-92	C	25,000	N	I	12-08-92	Indef.
ST93-1848	Columbia Gas Transmission Corp.	New York State Electric & Gas Corp.	12-21-92	B	19,281	Y	F	12-01-92	Indef.
ST93-1849	Columbia Gas Transmission Corp.	Stand Energy Corp	12-21-92	G-S	25	Y	F	12-01-92	03-31-93.
ST93-1850	Columbia Gas Transmission Corp.	Stand Energy Corp	12-21-92	G-S	396	N	F	12-01-92	03-31-93.
ST93-1851	Columbia Gas Transmission Corp.	Global Petroleum Corp	12-21-92	G-S	10,000	N	I	12-01-92	Indef.
ST93-1852	Columbia Gulf Transmission Co.	Chevron USA, Inc	12-21-92	G-S	200,000	N	I	12-06-92	Indef.
ST93-1853	Columbia Gulf Transmission Co.	CMS Gas Marketing Co.	12-21-92	G-S	100,000	N	I	12-11-92	Indef.

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ST93–1854	Columbia Gulf Transmission Co.	Eagle Natural Gas Co .	12–21–92	G–S	30,000	N	I	12–11–92	Indef.
ST93–1855	Tennessee Gas Pipeline Co.	Fitchburg Gas & Electric Light Co.	12–21–92	G–S	2,012	N	F	12–01–92	Indef.
ST93–1856	Tennessee Gas Pipeline Co.	East Tennessee Natural Gas Co.	12–21–92	G–ST	75,770	N	F	12–07–92	Indef.
ST93–1857	Tennessee Gas Pipeline Co.	NGC Transportation, Inc.	12–21–92	G–S	15,000	N	F	12–01–92	01–01–93.
ST93–1858	Tennessee Gas Pipeline Co.	Continental Energy Marketing Inc.	12–21–92	G–S	50,000	N	I	12–01–92	Indef.
ST93–1859	Tennessee Gas Pipeline Co.	AGF, Inc	12–21–92	G–S	10,000	N	I	12–05–92	Indef.
ST93–1860	Mississippi River Trans. Corp.	National Steel Corp	12–21–92	G–S	7,500	N	F	12–01–92	02–28–93.
ST93–1861	Mississippi River Trans. Corp.	Monsanto Co	12–21–92	G–S	273	N	F	12–04–92	Indef.
ST93–1862	Mississippi River Trans. Corp.	Monsanto Co	12–21–92	G–S	211	N	F	12–04–92	Indef.
ST93–1863	Mississippi River Trans. Corp.	Vesta Energy Co	12–21–92	G–S	586	N	F	12–01–92	Indef.
ST93–1864	Trunkline Gas Co	Samedan Oil Corp	12–21–92	G–S	50,000	N	I	12–01–92	Indef.
ST93–1865	Trunkline Gas Co	Coastal Gas Marketing Co.	12–21–92	G–S	100,000	N	I	12–11–92	Indef.
ST93–1866	Trunkline Gas Co	CNG Producing Co	12–21–92	G–S	60,000	N	I	12–09–92	Indef.
ST93–1867	Trunkline Gas Co	Memphis Light, Gas & Water Division.	12–21–92	B	10,000	N	I	12–01–92	Indef.
ST93–1868	Trunkline Gas Co	Mississippi River Trans. Corp.	12–21–92	G	50,000	N	I	12–01–92	Indef.
ST93–1869	Trunkline Gas Co	Chevron U.S.A., Inc	12–21–92	G–S	50,000	N	I	12–01–92	Indef.
ST93–1870	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	100,000	N	I	11–20–92	Indef.
ST93–1871	CNG Transmission Corp.	Cogen Energy Technology.	12–21–92	G–S	1,600	N	I	11–24–92	Indef.
ST93–1872	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	100,000	N	I	12–01–92	Indef.
ST93–1873	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	9,125	N	I	11–30–92	Indef.
ST93–1874	CNG Transmission Corp.	Indeck Energy Services.	12–21–92	G–S	1,825	N	I	11–25–92	Indef.
ST93–1875	CNG Transmission Corp.	American Central Gas Co.	12–21–92	G–S	1,825	N	I	11–25–92	Indef.
ST93–1876	CNG Transmission Corp.	American Central Gas Co.	12–21–92	G–S	1,825	N	I	11–25–92	Indef.
ST93–1877	CNG Transmission Corp.	American Central Gas Co.	12–21–92	G–S	1,825	N	I	11–25–92	Indef.
ST93–1878	CNG Transmission Corp.	American Central Gas Co.	12–21–92	G–S	34,675	N	I	11–25–92	Indef.
ST93–1879	CNG Transmission Corp.	U.S. Gypsum Co	12–21–92	G–S	1,500	N	I	12–01–92	Indef.
ST93–1880	CNG Transmission Corp.	New Jersey Natural Gas Co.	12–21–92	G–S	10,000	N	I	12–01–92	Indef.
ST93–1881	CNG Transmission Corp.	Virginia Natural Gas Co.	12–21–92	G–S	7,500	N	I	12–01–92	Indef.
ST93–1882	CNG Transmission Corp.	Centran Corp	12–21–92	G–S	1,500	N	I	12–01–92	Indef.
ST93–1883	CNG Transmission Corp.	Cogen Energy Technology.	12–21–92	G–S	740	N	I	12–03–92	Indef.
ST93–1884	CNG Transmission Corp.	KCS Energy Marketing	12–21–92	G–S	30,000	N	I	12–02–92	Indef.
ST93–1885	CNG Transmission Corp.	Continental Energy Marketing.	12–21–92	G–S	30,000	N	I	12–02–92	Indef.
ST93–1886	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1887	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1888	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1889	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1890	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1891	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1892	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1893	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1894	CNG Transmission Corp.	Access Energy Corp ...	12–21–92	G–S	8,760	N	I	12–05–92	Indef.
ST93–1895	CNG Transmission Corp.	New Jersey Natural Gas Co.	12–21–92	G–S	10,000	N	I	12–01–92	Indef.

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ST93-1896	CNG Transmission Corp.	Continental Energy Marketing.	12-21-92	G-S	30,000	N	I	12-08-92	Indef.
ST93-1897	K N Energy, Inc	K N Gas Marketing, Inc	12-21-92	G-S	100,000	N	I	11-25-92	Indef.
ST93-1898	K N Energy, Inc	Bridgegas USA, Inc	12-22-92	B	50,000	N	I	12-01-92	Indef.
ST93-1899	Tennessee Gas Pipeline Co.	Seagull Marketing Services, Inc.	12-22-92	G-S	250,000	N	I	12-03-92	Indef.
ST93-1900	Tennessee Gas Pipeline Co.	New York State Electric & Gas Corp.	12-22-92	G-S	8,072	N	F	12-01-92	Indef.
ST93-1901	Tennessee Gas Pipeline Co.	Pennsylvania & Southern Gas Co.	12-22-92	G-S	4,717	N	F	12-01-92	Indef.
ST93-1902	Viking Gas Transmission Co.	Great Plains Natural Gas Co.	12-22-92	G-S	3,821	N	I	12-09-92	10-31-02.
ST93-1903	Delhi Gas Pipeline Corp.	Texas Eastern Transmission Corp.	12-22-92	C	250,000	N	I	12-03-92	Indef.
ST93-1904	Arkla Energy Resources.	Arkla Energy Marketing Co.	12-22-92	G-S	50,000	A	F	11-01-92	Indef.
ST93-1905	Colorado Interstate Gas Co.	Public Service Co. of Colorado.	12-22-92	G-S	10,000	N	I	11-23-92	Indef.
ST93-1906	Natural Gas P/L Co. of America.	Seagull Marketing Services, Inc.	12-22-92	G-S	410,000	N	I	12-05-92	Indef.
ST93-1907	Viking Gas Transmission Co.	Peoples Natural Gas Co.	12-23-92	G-S	1,564	N	I	12-03-92	10-01-02.
ST93-1908	Tennessee Gas Pipeline Co.	Middle TN Nat. Gas Utility, et al.	12-23-92	G-S	1,020	N	F	12-01-92	03-31-93.
ST93-1909	Tennessee Gas Pipeline Co.	United States Gypsum Co.	12-23-92	G-S	1,200	N	F	12-01-92	04-01-93.
ST93-1910	Tennessee Gas Pipeline Co.	Capitol District Energy Center.	12-23-92	G-S	3,200	N	F	12-02-92	02-28-93.
ST93-1911	Columbia Gas Transmission Corp.	Jones-Hamilton Co	12-23-92	G-S	154	Y	F	12-15-92	11-30-93.
ST93-1912	Columbia Gas Transmission Corp.	Columbia Gas of Kentucky, Inc.	12-23-92	G-S	9,400	Y	F	12-09-92	Indef.
ST93-1913	Delhi Gas Pipeline Corp.	Natural Gas P/L Co. of America.	12-23-92	C	85,000	N	I	11-25-92	Indef.
ST93-1914	Delhi Gas Pipeline Corp.	Natural Gas P/L Co. of America.	12-23-92	C	3,500	N	I	12-02-92	Indef.
ST93-1915	ANR Pipeline Co	Mobil Natural Gas Inc.	12-23-92	G-S	100,000	N	F	12-01-92	Indef.
ST93-1916	ANR Pipeline Co	Premier Gas Co	12-23-92	G-S	100,000	N	F	12-01-92	Indef.
ST93-1917	ANR Pipeline Co	Commonwealth Gas Services, Inc.	12-23-92	B	50,000	N	I	12-01-92	Indef.
ST93-1918	ANR Pipeline Co	Michigan Gas Co	12-23-92	B	100,000	N	I	12-01-92	Indef.
ST93-1919	ANR Pipeline Co	Helmerich & Payne Energy Service.	12-23-92	G-S	50,000	N	F	12-01-92	Indef.
ST93-1920	ANR Pipeline Co	Greenwood Comm. of Public Works.	12-23-92	B	20,354	A	I	11-26-92	Indef.
ST93-1921	ANR Pipeline Co	Land O' Lakes, Inc	12-23-92	G-S	265	A	F	12-01-92	Indef.
ST93-1922	ANR Pipeline Co	Battlecreek Gas Co	12-23-92	B	4,700	A	F	12-01-92	10-31-02.
ST93-1923	Colorado Interstate Gas Co.	Western Natural Gas & Trans. Corp.	12-23-92	G-S	10,000	N	I	11-26-92	11-30-93.
ST93-1924	Natural Gas P/L Co. of America.	Mississippi River Trans Corp.	12-23-92	G	67,600	N	F	12-01-92	11-30-93.
ST93-1925	Natural Gas P/L Co. of America.	Vesta Energy Co	12-23-92	G-S	60,000	N	I	03-16-92	Indef.
ST93-1926	Panhandle Eastern Pipe Line Co.	Central Illinois Public Service Co.	12-23-92	G-S	10,000	N	F	11-01-92	Indef.
ST93-1927	Panhandle Eastern Pipe Line Co.	Indiana Gas Co	12-23-92	G-S	50,241	N	F	12-01-92	Indef.
ST93-1928	Panhandle Eastern Pipe Line Co.	American National Can Co.	12-23-92	G-S	1,941	N	F	12-01-92	Indef.
ST93-1929	Panhandle Eastern Pipe Line Co.	Anadarko Trading Co	12-23-92	G-S	150,000	N	F	12-01-92	Indef.
ST93-1930	Panhandle Eastern Pipe Line Co.	Missouri Public Service	12-23-92	G-S	1,200	N	F	12-01-92	Indef.
ST93-1931	Panhandle Eastern Pipe Line Co.	MG Natural Gas Corp.	12-23-92	G-S	21,030	N	F	12-01-92	Indef.
ST93-1932	Panhandle Eastern Pipe Line Co.	Tarpon Gas Marketing Ltd.	12-23-92	G-S	19,880	N	F	12-01-92	Indef.
ST93-1933	United Gas Pipe Line Co.	Fina Natural Gas Co	12-23-92	G-S	42,107	N	F	12-10-92	04-09-93.
ST93-1934	United Gas Pipe Line Co.	MG Natural Gas Corp.	12-23-92	G-S	20,000	N	F	11-29-92	03-23-93.
ST93-1935	United Gas Pipe Line Co.	International Paper Co	12-23-92	G-S	16,125	N	F	12-01-92	03-31-93.
ST93-1936	Gateway Pipeline Co	MG Natural Gas Corp.	12-23-92	G-S	40,000	N	I	12-18-92	04-17-93.
ST93-1937	Webb/Duval Gathering	Natural Gas P/L Co. of America.	12-23-92	C	13,000	N	I	10-01-92	Indef.
ST93-1938	Webb/Duval Gathering	Texas Eastern Transmission Co.	12-23-92	C	75,000	N	I	11-01-92	Indef.
ST93-1939	Webb/Duval Gathering	Tennessee Gas Pipeline Co.	12-23-92	C	75,000	N	I	11-01-92	Indef.

Docket No.[1]	Transporter/seller	Recipient	Date filed	Part 284 subpart	Estimate maximum daily quantity[2]	Aff. Y/A/N[3]	Rate Sch.	Date commenced	Projected termination date
ST93–1940	Webb/Duval Gathering	Texas Eastern Transmission Co.	12–23–92	C	30,000	N	I	07–01–92	Indef.
ST93–1941	Webb/Duval Gathering	Natural Gas P/L Co. of America.	12–23–92	C	30,000	N	I	08–01–92	Indef.
ST93–1942	Webb/Duval Gathering	Tennessee Gas Pipeline Co.	12–23–92	C	30,000	N	I	09–01–92	Indef.
ST93–1943	Sonat Intrastate-Alabama Inc.	Southern Natural Gas Co.	12–23–92	C	200	N	I	11–26–92	Indef.
ST93–1944	Gas Transport, Inc	Hope Gas, Inc	12–23–92	B	5,102	N	I	12–01–92	02–28–93.
ST93–1945	Gas Transport, Inc	Hope Gas, Inc.	12–23–92	B	5,000	N	I	12–01–92	11–30–93.
ST93–1946	Northern Natural Gas Co.	Feagan Gathering Co .	12–23–92	G–S	20,000	N	F/I	12–02–92	Indef.
ST93–1947	Northern Natural Gas Co.	Mobil Natural Gas Inc .	12–23–92	G–S	30,000	N	F/I	12–01–92	Indef.
ST93–1948	Northern Natural Gas Co.	Cibola Corp	12–23–92	G–S	200,000	N	F/I	12–21–92	Indef.
ST93–1949	El Paso Natural Gas Co.	Western Natural Gas & Trans. Corp.	12–23–92	G–S	8,755	N	I	12–01–92	Indef.
ST93–1950	Webb/Duval Gathering	Tennessee Gas Pipeline Co.	12–23–92	C	13,000	N	I	10–01–92	Indef.
ST93–1951	Tennessee Gas Pipeline Co.	Distrigas of Massachusetts Corp.	12–24–92	G	11,470	N	F	12–01–92	03–31–93.
ST93–1952	Questar Pipeline Co	Grand Valley Gas Co ..	12–28–92	G–S	20,000	N	I	12–03–92	Indef.
ST93–1953	Gasdel Pipeline System, Inc.	Total Minatone Corp ...	12–28–92	G–S	5,665	N	I	12–02–92	Indef.
ST93–1954	Gasdel Pipeline System, Inc.	FMI Hydrocarbons Co .	12–28–92	G–S	512	N	I	12–01–92	Indef.
ST93–1955	Trunkline Gas Co	Magic Chef Division of Maytag.	12–28–92	G–S	500	N	F	12–01–92	Indef.
ST93–1956	Panhandle Eastern Pipe Line Co.	Archer Daniels Midland Co.	12–28–92	G–S	7,229	N	F	12–01–92	Indef.
ST93–1957	Panhandle Eastern Pipe Line Co.	Central Illinois Light Co	12–28–92	G–S	22,000	N	I	11–01–92	Indef.
ST93–1958	ANR Pipeline Co	Transok Gas Co	12–28–92	G–S	50,000	N	F	12–04–92	Indef.
ST93–1959	ANR Pipeline Co	Boston Edison	12–28–92	B	200,000	Y	I	10–24–92	Indef.
ST93–1960	ANR Pipeline Co	Unigas Energy, Inc	12–28–92	G–S	50,000	N	F	12–31–92	Indef.
ST93–1961	Algonquin Gas Transmission Co.	Distrigas of Massachusetts Corp.	12–28–92	G–S	10,200,000	N	I	12–08–92	Indef.
ST93–1962	Algonquin Gas Transmission Co.	Citizens Gas Supply Corp.	12–28–92	G–S	857,000	N	I	04–01–92	Indef.
ST93–1963	Algonquin Gas Transmission Co.	V.H.C. Gas Systems, L.P.	12–28–92	G–S	822,525	N	I	12–05–92	Indef.
ST93–1964	Algonquin Gas Transmission Co.	Equitable Resource Marketing Co.	12–28–92	G–S	500,000	N	I	10–31–92	Indef.
ST93–1965	Algonquin Gas Transmission Co.	O&R Energy, Inc	12–28–92	G–S	300,000	N	I	11–25–92	Indef.
ST93–1966	Algonquin Gas Transmission Co.	O&R Energy, Inc	12–28–92	G–S	10,000	N	I	12–09–92	Indef.
ST93–1967	Algonquin Gas Transmission Co.	Citizens Gas Supply Corp.	12–28–92	G–S	200,000	N	I	12–02–92	Indef.
ST93–1968	Algonquin Gas Transmission Co.	Distrigas of Massachusetts Corp.	12–28–92	B	77,500	N	F	12–07–92	11–01–02.
ST93–1969	ANR Pipeline Co	Michigan Gas Utilities .	12–28–92	B	5,000	A	I	12–01–92	Indef.
ST93–1970	Tennessee Gas Pipeline Co.	CNG Producing Co	12–29–92	G–S	6,500	N	F	12–02–92	Indef.
ST93–1971	Tennessee Gas Pipeline Co.	Continental Energy Marketing, Inc.	12–29–92	G–S	715	N	F	12–01–92	12–31–92.
ST93–1972	East Tennessee Natural Gas Co.	Middle Tennessee Utility District.	12–29–92	G–S	1,000	N	F	12–01–92	03–31–93.
ST93–1973	Peoples Natural Gas Co.	CNG Transmission Corp.	12–29–92	C	8,000	Y	I	12–02–92	12–31–92.
ST93–1974	Colorado Interstate Gas Co.	Enron Gas Marketing, Inc.	12–29–92	G–S	100,000	N	I	12–11–92	Indef.
ST93–1975	Colorado Interstate Gas Co.	Vesgas Co	12–29–92	G–S	3,000	N	F	12–01–92	08–30–95.
ST93–1976	Colorado Interstate Gas Co.	Western Natural Gas & Trans. Corp.	12–29–92	G–S	10,000	N	I	12–01–92	Indef.
ST93–1977	Colorado Interstate Gas Co.	Gasmark, Ltd	12–29–92	G–S	25,000	N	I	12–08–92	12–31–93.
ST93–1978	Colorado Interstate Gas Co.	Louis Dreyfus Energy Corp.	12–29–92	G–S	50,000	N	I	12–09–92	Indef.
ST93–1979	Colorado Interstate Gas Co.	Texaco Gas Marketing Inc.	12–29–92	G–S	50,000	N	I	12–12–92	Indef.
ST93–1980	Natural Gas P/L Co. of America.	Midcon Marketing Corp	12–29–92	G–S	2,500	A	F	12–01–92	02–28–93.
ST93–1981	Natural Gas P/L Co. of American.	North American Resources Co.	12–29–92	G–S	36,400	N	F	11–01–92	12–31–95.
ST93–1982	Arkla Energy Resources.	Cross Oil & Refining Co.	12–29–92	G–S	3,000	N	F	12–21–92	Indef.
ST93–1993	Valero Transmission, L.P.	Transwestern Pipeline Co.	12–30–92	C	20,000	N	I	12–01–92	Indef.

Docket No.[1]	Transporter/seller	Recipient	Date filed	Part 284 subpart	Estimated maximum daily quantity[2]	Aff. Y/A/N[3]	Rate Sch.	Date commenced	Projected termination date
ST93-1984	Transamerican Natural Gas Corp.	Tennessee Gas P/L Co., Et Al.	12-30-92	C	50,000	N	I	12-01-92	Indef.
ST93-1985	Transamerican Natural Gas Corp.	Trunkline Gas Co	12-30-92	C	20,000	N	I	12-11-92	Indef.
ST93-1986	CNG Transmission Co	Phillips Gas Pipeline Co.	12-30-92	C	50,000	N	I	12-09-92	Indef.
ST93-1987	CNG Transmission Co	Northern Natural Gas Co.	12-30-92	C	50,000	N	I	12-05-92	Indef.
ST93-1988	CNG Transmission Co	Williams Natural Gas Co.	12-30-92	C	50,000	N	I	12-05-92	Indef.
ST93-1989	Trunkline Gas Co	Catex Energy, Inc	12-30-92	G-S	50,000	N	I	11-30-92	Indef.
ST93-1990	Williston Basin Inter. P/L Co.	Retex Gathering Co., Inc.	12-30-92	G-S	33,112	N	I	12-30-92	09-30-94.
ST93-1991	Williston Basin Inter. P/L Co.	Koch Hydrocarbon Co	12-30-92	G-S	244,650	A	I	12-23-92	05-01-93.
ST93-1992	Black Marlin Pipeline Co.	Union Carbide Chemicals & Plastics.	12-30-92	G-S	30,000	N	I	12-01-92	Indef.
ST93-1993	Arida Energy Resources.	Polaris Pipeline Corp	12-30-92	G-S	20,000	N	I	11-29-92	Indef.
ST93-1994	Tennessee Gas Pipeline Co.	Boston Gas Co	12-30-92	G-S	41,687	N	F	06-28-92	Indef.
ST93-1995	Tennessee Gas Pipeline Co.	C&R Energy, Inc	12-30-92	G-S	2,750,000	N	I	11-01-92	Indef.
ST93-1996	Tennessee Gas Pipeline Co.	Entrade Corp	12-30-92	G-S	2,800	N	F	12-08-92	03-31-93.
ST93-1997	Tennessee Gas Pipeline Co.	Entrade Corp	12-30-92	G-S	10,000	N	F	12-01-92	02-01-93.
ST93-1998	Tennessee Gas Pipeline Co.	Valley Gas Co	12-30-92	G-S	4,255	N	F	12-02-92	Indef.
ST93-1999	Tennessee Gas Pipeline Co.	Connecticut Natural Gas Corp.	12-30-92	G-S	15,390	N	F	12-01-92	Indef.
ST93-2000	Tennessee Gas Pipeline Co.	T.W. Phillips Gas & Oil Co.	12-30-92	G-S	3,982	N	F	12-01-92	Indef.
ST93-2001	Tennessee Gas Pipeline Co.	City of Huntsville, Et Al	12-30-92	G-S	12,325	N	F	11-04-92	Indef.
ST93-2002	Tennessee Gas Pipeline Co.	New York State Electric & Gas Corp.	12-30-92	G-S	9,744	N	F	10-02-92	Indef.
ST93-2003	ANR Pipeline Co	Ohio Gas Co	12-30-92	B	10,000	N	F	12-05-92	03-31-97.
ST93-2004	Williston Basin Inter. P/L Co.	Koch Hydrocarbon Co	12-31-92	G-S	235	A	F	12-01-92	03-31-93.
ST93-2005	Williston Basin Inter. P/L Co.	Koch Hydrocarbon Co	12-31-92	G-S	2,065	A	F	12-01-92	02-01-93.
ST93-2006	Williston Basin Inter. P/L Co.	Amerada Hess Corp	12-31-92	G-S	37,500	N	F	12-01-92	12-01-93.
ST93-2007	Williston Basin Inter. P/L Co.	Exxon Corp	12-31-92	G-S	920	A	F	12-01-92	02-26-93.
ST93-2008	Delhi Gas Pipeline Corp.	Transwestern Pipeline Co.	12-31-92	C	275,000	N	I	12-02-92	Indef.
ST93-2009	Natural Gas P/L Co. of America.	North Shore Gas Co	12-31-92	G-S	10,000	N	F	12-01-92	11-30-93.
ST93-2010	Tennessee GAs Pipeline Co.	Berkshire Gas Co	12-31-92	G-S	7,222	N	F	12-01-92	Indef.
ST93-2011	Tennessee Gas Pipeline Co.	Amerada Hess Corp	12-31-92	G-S	100,000	N	I	12-02-92	Indef.
ST93-2012	Channel Industries Gas Co.	Florida Gas Transmission Co.	12-31-92	C	20,000	N	I	12-01-92	Indef.
ST93-2013	Channel Industries Gas Co.	Northern Natural Gas Co.	12-31-92	C	20,000	N	I	12-01-92	Indef.
ST93-2014	Iroquois Gas Trans. System, L.P.	Tarpon Gas Marketing Ltd.	12-30-92	G-S	576,000	N	I	12-01-92	Indef.
ST93-2015	Iroquois Gas Trans. System, L.P.	Direct Energy Marketing Ltd.	12-30-92	G-S	400,000	N	I	12-02-92	Indef.
ST93-2016	Iroquois Gas Trans. System, L.P.	Colonial Gas Co	12-30-92	B	460,000	N	I	12-10-92	Indef.
ST93-2017	Lone Star Gas Co	Transwestern Gas Pipeline Co.	12-31-92	C	50,000	N	I	12-04-92	Indef.
ST93-2018	CNG Transmission Co	Panhandle Eastern Pipe Line Co.	12-31-92	C	50,000	N	I	12-05-92	Indef.
ST93-2019	Sea Robin Pipeline Co	Sonat Marketing Co	12-31-92	G-S	7,224	A	I	12-01-92	12-31-92.
ST93-2020	Panhandle Eastern Pipe Line Co.	Dayton Power & Light Co.	12-31-92	G-S	8,360	N	F	12-01-92	Indef.

[1] Notice of transactions does not constitute a determination that filings comply with commission regulations in accordance with order No. 436 (Final rule and notice requesting supplemental comments, 50 FR 42,372, 10/10/85).

[2] Estimated maximum daily volumes includes volumes reported by the filing company in MMBTU, MCF and DT.

[3] Affiliation of reporting company to entities involved in the transaction. A "Y" indicates affiliation, an "A" indicates marketing affiliation, and a "N" indicates no affiliation.

[FR Doc. 93–3897 Filed 2–18–93; 8:45 am]
BILLING CODE 6717–01–M

[Docket No. PR93–8–000]

Bridgeline Gas Distribution System; Petition for Rate Approval

February 12, 1993.

Take notice that on February 1, 1993, Bridgeline Gas Distribution Company (Bridgeline) filed pursuant to § 284.123(b)(2) of the Commission's regulations, a petition for rate approval requesting that the Commission approve as fair and equitable maximum rates for the transportation and storage of natural gas to be performed under a blanket certificate issued pursuant to § 284.224 of the Commission's regulations. Bridgeline requests Commission approval of the following rates:

Firm Transportation—36.75 cents/MMBtu/day
Interruptible Transportation—36.75 cents/MMBtu
Firm Storage:
Storage Charges—20.21 cents/MMBtu/month
Deliverability Charge—50.97 cents/MMBtu/month
Injection/Withdrawal Charge—3.37 cents/MMBtu
Interruptible Storage:
Storage Charge—$2.43/MMBtu/average monthly balance
Injection/Withdrawal Charge—3.37 cents/MMBtu

Bridgeline states that it is a local distribution company that operates within the State of Louisiana. Concurrent with this petition, Bridgeline has applied for a blanket certificate under § 284.224 in Docket No. CP93–190–000 which, if granted, would allow Bridgeline to engage in the sale, transportation (including storage) and assignment of natural gas as permitted intrastate pipelines under subparts C, D and E of part 284.

Pursuant to § 284.123(b)(2)(ii), if the Commission does not act within 150 days of the filing date, the rate will be deemed to be fair and equitable and not in excess of an amount which interstate pipelines would be permitted to charge for similar transportation service. The Commission may, prior to the expiration of the 150 day period, extend the time for action or institute a proceeding to afford parties an opportunity for written comments and for the oral presentation of views, data and arguments.

Bridgeline states that its system is composed of approximately 700 miles of pipe and it currently performs firm and interruptible service to end-users in southern Louisiana. In addition, Bridgeline has an underground gas storage (salt dome) cavern in Ascension Parish, Louisiana with a total capacity of 8 million MMBtu which interconnects with its pipeline system.

Any person desiring to participate in this rate proceeding must file a motion to intervene in accordance with §§ 385.211 and 385.214 of the Commission's Rules of Practice and Procedures. All motions must be filed with the Secretary of the Commission on or before February 26, 1993. The petition for rate approval is on file with the Commission and is available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 93–3900 Filed 2–18–93; 8:45 am]
BILLING CODE 6717–01–M

[Docket No. RP93–75–000]

Florida Gas Transmission Co.; Petition for Limited Waiver of Tariff Provisions

February 12, 1993.

Take notice that on February 10, 1993, Florida Gas Transmission Company (FGT) hereby petitions the Federal Energy Regulatory Commission (Commission) for a limited waiver of Commission policy and FGT's FERC Tariff, to the extent necessary, to permit the City of Gainesville, Florida d/b/a Gainesville Regional Utilities (Gainesville) to retain its existing priority date while adding a new delivery point to an agreement for firm transportation service under Rate Schedule FTS–1 and to an agreement for preferred transportation service under Rate Schedule PTS–1.

FGT states that good cause exists for granting the requested waivers in that (i) FGT will continue to serve the same customer, Gainesville; (ii) the new delivery point will be located in the same geographic location as other existing delivery points at which FGT presently serves Gainesville; and (iii) the new delivery point will not interfere with FGT's ability to render firm service to FGT's other customers.

Any person desiring to be heard or to make any protest with reference to said application should on or before February 22, 1993 file with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426 a motion to intervene or protest in accordance with §§ 385.211 and 385.214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Protests will be considered by it in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene in accordance with the Commission's rules.

Copies of this filing are on file with the Commission and are available for public inspection in the Public Reference Room.

Lois D. Cashell,

Secretary.

[FR Doc. 93–3898 Filed 2–18–93; 8:45 am]
BILLING CODE 6717–01–M

[Docket Nos. ES93–19–000, ES93–19–001 and ES93–19–002]

Massachusetts REFUSETECH, Inc.; Issuance of Commission Letter Order and Comment Period

February 12, 1993.

Take notice that on February 12, 1993, the Chief Accountant, pursuant to delegated authority, issued a Letter Order to Massachusetts REFUSETECH, Inc. (MRI) conditionally granting blanket approval under 18 CFR part 34 of all future issuances of securities and assumptions of liabilities by MRI.

The February 12, 1993 Letter Order, in ordering paragraphs (B)(1), (B)(2) and (B)(3), reads as follows:

(B)(1) Within 30 days of the date of this letter order, any person desiring to be heard or to protest this blanket approval of issuances of securities or assumptions of liabilities by MRI should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214).

(B)(2) Absent a request for hearing within the period set forth above, MRI is authorized to issue securities and assume obligations or liabilities as guarantor, endorser, surety, or otherwise in respect of any security of another person; provided that such issue or assumption is for some lawful object within the corporate purposes of the applicant, and compatible with the public interest, and is reasonably necessary or appropriate for such purposes.

(B)(3) The Commission reserves the right to require a further showing that neither public nor private interests will be adversely affected by continued Commission approval of MRI's issuances of securities or assumption of liabilities.

Notice is hereby given that the deadline for filing a motion to intervene or protest, as set forth above, is March 15, 1993.

Copies of the full text of the Letter Order are available from the Commission's Public Reference Branch,

room 3308, 941 North Capitol Street, NE., Washington, DC 20426.

Lois D. Cashell,

Secretary.

[FR Doc. 93–3901 Filed 2–18–93; 8:45 am]

BILLING CODE 6717–01–M

Docket No. FA92–35–001

South Carolina Generating Co. Inc.; Filing

February 12, 1993.

Take notice that on January 21, 1993, South Carolina Generating Company, Inc. tendered for filing its refund report in the above-referenced docket.

Any person desiring to be heard or to protest said filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 18 CFR 385.214). All such motions or protests should be filed on or before February 26, 1993. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 93–3903 Filed 2–18–93; 8:45 am]

BILLING CODE 6717–01–M

[Docket No. TX93–1–000]

Tex-La Electric Cooperative of Texas, Inc.; Amended Filing

February 12, 1993.

Take notice that on February 9, 1993, Tex-La Electric Cooperative of Texas, Inc. (Tex-La) filed an amendment to its January 19, 1993 application in this docket. The January 19, 1993 application was filed pursuant to section 211 of the Federal Power Act, 16 U.S.C. 824j, as amended by the Energy Policy Act of 1992, Pub. L. No. 102–486, 106 Stat. 2776 (1992), for an order requiring Texas Utilities Electric Company to provide transmission services to Tex-La. Tex-La states that, since its original filing, it has learned of additional facts relevant to its application, some of which change, and others of which elaborate upon, the situation described in Tex-La's original filing.

Any person desiring to be heard or to protest said amended filing should file a motion to intervene or protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 18 CFR 385.214). All such motions or protests should be filed on or before March 15, 1993. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 93–3902 Filed 2–18–93; 8:45 am]

BILLING CODE 6717–01–M

[Docket No. RP92–135–002]

West Texas Gas, Inc.; Filing

February 12, 1993.

Take notice that on February 9, 1993, West Texas Gas, Inc. ("WTG") filed Fifth Revised Sheet No. 4 to its FERC Gas Tariff, Revised Volume No. 1, proposed to be effective March 1, 1993. WTG states that Fifth Revised Sheet No. 4 is filed in compliance with the Commission's letter order in the captioned proceeding issued on December 28, 1992, and that the rates set forth therein are the settlement rates approved by the Commission in this proceeding.

WTG states that copies of the filing were served upon WTG's customers and interested state commissions.

WTG's transmittal letter requests waiver of the Commission's regulations to permit the settlement rates to become effective on less than 30 days' notice. WTG states that good cause exists for such waiver because the settlement rates are lower than the rates WTG presently is collecting subject to refund.

Any person desiring to protest said filing should file a protest with the Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426, in accordance with Rule 211 of the Commission's Rules of Practice and Procedure 18 CFR 385.211. All such protests should be filed on or before February 22, 1993. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to makes protestants parties to the proceeding. Copies of this filing are on file with the Commission and are available for public inspection.

Lois D. Cashell,

Secretary.

[FR Doc. 93–3899 Filed 2–18–93; 8:45 am]

BILLING CODE 6717–01–M

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–4596–7]

Environmental Impact Statements; Availability

Responsible Agency: Office of Federal Activities, General Information (202) 260–5076 OR (202) 260–5075.

Availability of Environmental Impact Statements Filed February 8, 1993 Through February 12, 1993 Pursuant to 40 CFR 1506.9.

EIS No. 930037, REVISED FINAL EIS, AFS, CA, Red Hill Planning Area Timber Sale, Implementation, Sequoia National Forest, Tule River Ranger District, Tulare County, CA, Due: March 22, 1993, Contact: Raul Contreras (209) 539–2607.

EIS No. 930038, FINAL EIS, FHW, VA, Downtown Norfolk Corridor Improvement, I–264/Berkley Bridge to St. Paul's Boulevard/ Brambleton Avenue Corridor, Funding, VA, Due: March 22, 1993, Contact: James M. Tumlin (804) 771–2371.

EIS No. 930039, DRAFT EIS, UAF, TX, Carswell Air Force Base (AFB) Disposal and Reuse, Implementation, Tarrant County, TX, Due: April 5, 1993, Contact: Ltc. Gary Baumgartel (512) 536–3869.

EIS No. 930040, DRAFT SUPPLEMENT, AFS, WA, OR, Pacific Northwest Region National Forests, Nursery Pest Control Management Plan, New Information concerning the Use of Additional Chemical at Wind River Nursery, Gifford Pinchot National Forest and J. Herbert Stone Nursery, Rogue River National Forest, Implementation, WA and OR, Due: April 5, 1993, Contact: Ed Olson (509) 427–5679.

EIS No. 930041, DRAFT EIS, FRC, FL, MS, AL, LA, Florida Gas Transmission Phase III Expansion Project, Construction and Operation, Special Use Permits, Section 10 and 404 Permits and NPDES Permit, extending through Fl, AL, MS and LA , Due: April 5, 1993, Contact: Mark Jensen (202) 208–1121.

Amended Notices

EIS No. 920429, DRAFT EIS, DOE, TX, MS, AL, LA, Strategic Petroleum Reserve Expansion Plan, Implementation and Site Selection, Brazoria and Jefferson Counties, TX;

Iberia and St. Mary Parishes, LA or Perry County, MS with Associated Pipeline and Terminals located in several counties and parishes of TX, LA, MS and AL, Due: March 5, 1993, Contact: Hal Delaplane (703) 934–3320.

Published FR—11–6–92—Review Period Reopened.

Dated: February 16, 1993.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 93–3993 Filed 2–18–93; 8:45 am]

BILLING CODE 6560–50–U

(ER–FRL–4596–8)

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared February 1, 1993 through February 5, 1993 pursuant to the Environmental Review Process (ERP), under section 309 of the Clean Air Act and section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at (202) 260–5076.

An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated April 10, 1992 (57 FR 12499).

Draft EISs

ERP No. D–AFS–K61124–CA Rating EC2, Echo Summit Ski Area Site, Operation and Management, Issue Special Use Permit, El Dorado National Forest, Placerville Ranger District, El Dorado County, CA.

Summary: EPA commended the Forest Service for selecting an alternative which provides a wide range of year round recreational opportunities to the public. EPA expressed concerns with potential impacts to water quality and wetlands. EPA urged the Forest Service to include stringent specifications for sewage treatment, the water supply source, and wetland protection in the FEIS and special use permit prospectus.

ERP No. D–DOE–L61195–AK Rating EC2, Healy 50 Megawatt-Electric Coal Fired Power Plant Construction and Operation, Clean Coal Technologies Demonstration, Funding, NPDES and Section 404 Permits, Borough of Denali, AK.

Summary: EPA raised concerns with the cumulative air emissions associated with the proposed project and the existing Healy Power Plant. The FEIS should accurately reflect revised air impact analyses being prepared for the Prevention of Significant Deterioration permit application. Additional information was requested to support EPA's review of the National Pollution Discharge Elimination System permit application.

ERP No. D–FTA–C51014–NJ Rating EC2, Hudson River Waterfront Transportation Corridor Improvements, Funding, Transportation Systems Management, Light Rail Transit, Hudson and Bergen Counties, NJ.

Summary: EPA expressed environmental concerns about the proposed project's hazardous waste site and wetlands impacts. Accordingly, EPA requested additional information be presented in the final EIS to address these issues.

ERP No. D–USN–G11007–TX Rating LO, Chase Field Naval Air Station Disposal and Reuse, Implementation, Permits and Approval, City of Beeville, Bee County, TX.

Summary: EPA had no objections to the Navy's preferred alternative of conveying the majority of the buildings and non-aviation developed areas to the Texas Department of Criminal Justice, and the airfield and related facilities to the Beeville/Bee County Economic Development Corporation.

ERP No. DS–COE–A36247–PR Rating EC2, Portugues and Bucana Rivers Flood Control Project, Rio Portugues Dam and Reservoir Construction, Updated Information concerning Project Modifications, Municipality of Ponce, PR.

Summary: EPA had environmental concerns about the proposed project's potential water quality impacts, wetlands impacts, and habitat loss with respect to catadromous fish and requested that additional information be presented in the final supplemental EIS.

ERP No. DS–NOA–C64003–00 Rating LO, Shallow-Water Reeffish Fishery Management Plan, Updated Information, Amendment 2, Puerto Rico and U.S. Virgin Islands.

Summary: EPA believed that this project will result in several beneficial environmental impacts and does not object to its implementation.

Final EISs

ERP No. F–COE–K32046–CA, Los Angeles and Long Beach Harbors Navigation Improvements and Landfill Development Project, Construction and Approval of Master Plan Amendment, San Pedro Bay, Los Angeles County, CA.

Summary: EPA noted that the FEIS has legally incorrect conclusions regarding project conformity under the Clean Air Act; did not contain adequate information on air emissions; did not contain plans for mitigation to compensate for the loss of 510 acres of nearshore marine habitat; and did not adequately address EPA's comments on modification of the proposed alternative to reduce impacts to marine habitat and water quality. EPA strongly urged the Corps of Engineers to prepare a supplemental EIS, but if a supplemental is not issued, then EPA's comments on the FEIS should be addressed in the EIS Record of Decision.

ERP No. F–COE–K35034–CA, San Joaquin Hills Transportation Corridor Improvements, CA–73 Extension between I–5 in San Juan Capistrano City to Jamboree Road in Newport Beach City, Funding and Section 404 Permit, Orange County, CA.

Summary: Review of the Final EIS was not deemed necessary. No formal comment letter was sent to the preparing Agency.

ERP No. F–USN–C11007–00, US East Coast Homeporting Program, (two AOE–6 Class) Fast Combat Support Ships, Implementation, Site Selection, Naval Weapons Station Earle, Colts Neck, Monmouth Co., NJ; Yorktown Naval Weapons Station, Gloucester County, VA or Charleston Naval Weapons Station, Charleston County, SC.

Summary: EPA had no objection to the implementation of the project. However, EPA recommended that the FEIS's commitments to update the facility's spill response and control plan and to conduct appropriate sampling for future dredging operations be reflected in the Record of Decision (ROD).

ERP No. FS–FHW–F40239–MN, MN–TH–33 Improvements, I–35 to US TH–53, Additional Information Urban Section near the City of Cloquet, Approval of COE Permit, St. Louis River, Carlton and St. Louis Counties, MN.

Summary: EPA continued to express concerns with the wetland mitigation plan for the preferred alternative.

Dated: February 16, 1993.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 93–3992 Filed 2–18–93; 8:45 am]

BILLING CODE 6560–50–U

[OPPTS–400076; FRL–4189–1]

Emergency Planning and Community Right-to-Know Act; Train-the-Trainers Workshops

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA will hold a series of 2–day train-the-trainers workshops on section 313 of the Emergency Planning and Community Right-to-Know Act

(EPCRA) reporting requirements. The purpose of these workshops is to present a model course to persons who plan to train others to comply with the reporting requirements of section 313. Additionally, these workshops will address in detail the reporting requirements under EPCRA section 313 on source reduction and recycling activities which have been added pursuant to the Pollution Prevention Act of 1990.

DATES: The conferences will be held on the following dates: February 24–25, March 9–10, March 24–25, April 1–2, April 12–13, April 15–16, April 21–22, and May 12–13, 1993. The meetings will start at 9 a.m. on the first day and end at approximately 5 p.m. on the last day.

ADDRESSES: The conferences will be held at the following locations:

1. February 24–25, at the EPA Region VIII Office, 999 18th St., Denver, CO 80202.
2. March 9–10, at The Fairmont Hotel, 1717 N. Akard St., Dallas TX 75201.
3. March 24–25, at the EPA Region IV Office, 345 Courtland St. NE, Atlanta, GA 30365.
4. April 1–2, at the Stouffer Riviere Hotel, 1 West Whacker Dr., Chicago, IL 60601.
5. April 12–13, at the EPA Region IX Office, 75 Hawthorne St., San Francisco, CA 94105.
6. April 15–16, at the EPA Region X Office, 1200 Sixth Avenue, Seattle, WA 98101.
7. April 21–22, at the EPA Region I Office, One Congress St., Boston, MA 02203.
8. May 12–13, at EPA Headquarters Education Center Auditorium, 401 M St., SW., Washington DC 20460.

FOR FURTHER INFORMATION CONTACT: Tami McNamara, Environmental Assistance Division (TS–799), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, Telephone: 1–703–218–2555, Fax: 1–703–934–3156.

SUPPLEMENTARY INFORMATION: Registration will be taken on a first-come-first-served basis until 1 week prior to the start of each conference. Persons who should consider attending are representatives from industry, trade associations, consulting firms, or university continuing education departments. Attendance is restricted to those organizations that intend to provide training on a regular basis and expect to conduct a minimum of two training courses on section 313 prior to July 1, 1993. Persons who successfully complete the course will obtain a certification of proficiency. There is limited space available. To register, contact either by telephone, fax, or in writing, the person listed under FOR FURTHER INFORMATION CONTACT. Notification will be sent to each applicant regarding their acceptance for the training session. There is no registration fee for this training. If there is insufficient interest in any of the conferences, they may be canceled. The Agency bears no responsibility for attendees' decision to purchase non-refundable transportation tickets or accommodation reservations.

Dated: February 11, 1993.

Mark A. Greenwood.

Director, Office of Pollution Prevention and Toxics.

[FR Doc. 93–3949 Filed 2–18–93; 8:45 am]

BILLING CODE 6560–50–F

[OPPTS–44596; FRL–4571–4]

TSCA Chemical Testing; Receipt of Test Data

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: This notice announces the receipt of test data on octabromodiphenyl oxide (CAS No. 32536–52–0), 1,2-bis(tribromophenoxy)ethane (CAS No. 37853–59–1), and o- phenylenediamine (o-pda) (CAS No. 95–54–5) submitted pursuant to a final test rule under the Toxic Substances Control Act (TSCA). Publication of this notice is in compliance with section 4(d) of TSCA.

FOR FURTHER INFORMATION CONTACT: Susan B. Hazen, Director, Environmental Assistance Division (TS–799), Office of Pollution Prevention and Toxics, Environmental Protection Agency, Rm. E–543B, 401 M St., SW., Washington, DC 20460, (202) 554–1404, TDD (202) 554–0551.

SUPPLEMENTARY INFORMATION: Section 4(d) of TSCA requires EPA to publish a notice in the **Federal Register** reporting the receipt of test data submitted pursuant to test rules promulgated under section 4(a) within 15 days after it is received.

I. Test Data Submissions

Test data for octabromodiphenyl oxide were submitted by Ameribrom Inc., pursuant to a test rule at 40 CFR Part 766. They were received by EPA on January 11, 1993. The submission describes the analytical protocol for the determination of polybrominated dibenzo-p-dioxins and dibenzofurans by high-resolution gas chromatography/ medium high resolution mass spectrometry in octabromodiphenyl oxide.

Test data for 1,2-bis-(tribromophenoxy)ethane were submitted by the Great Lakes Chemical Corporation pursuant to a test rule at 40 CFR Part 766. They were received by EPA on February 2, 1993. The submission describes the analytical protocol for the determination of polybrominated dibenzo-p-dioxins and dibenzofurans by high-resolution gas chromatography/medium resolution mass spectrometry in 1,2-bis-(tribromophenoxy)ethane.

Test data for o-pda were submitted by E. I. Du Pont de Nemours and Company pursuant to a test rule at 40 CFR 799.3300. They were received by EPA on January 19, 1993. The submissions describe (1) the static-renewal acute 48-hour EC_{50} of o-pda to fed *Daphnia magna*, (2) flow-through 21-day toxicity of o-pda to water fleas, *Daphnia magna*, and (3) the static renewal 21-day toxicity of o-pda to *Daphnia magna*. This chemical is used in aramid fibers, rubber and plastic antioxidants, photographic chemicals, dye intermediates, corrosion inhibitors and pesticides.

EPA has initiated its review and evaluation process for these data submissions. At this time, the Agency is unable to provide any determination as to the completeness of the submissions.

II. Public Record

EPA has established a public record for this TSCA section 4(d) receipt of data notice (docket number OPPTS–44596). This record includes copies of all studies reported in this notice. The record is available for inspection from 8 a.m. to 12 noon, and 1 p.m. to 4 p.m., Monday through Friday, except legal holidays, in the TSCA Public Docket Office, Rm. NE–G004, 401 M St., SW., Washington, DC 20460.

Authority: 15 U.S.C. 2603.

Dated:February 10, 1993.

Charles M. Auer,

Director, Chemical Control Division, Office of Pollution Prevention and Toxics.

[FR Doc. 93–3948 Filed 2–18–93; 8:45 am]

BILLING CODE 6560–50–F

FEDERAL COMMUNICATIONS COMMISSION

[DA 93–159]

Lottery for 220–222 MHz Private Radio Land Mobile Nationwide Commercial Channels

AGENCY: Federal Communications Commission.

ACTION: Notice.

SUMMARY: The Commission has announced the date and time for a

lottery to be conducted for the purpose of selecting nationwide commercial 220–222 MHz band licensees. The Public Notice issued by the Commission contains a list of those applicants for 220 MHz nationwide commercial licenses that will be included in the lottery. Any applicant that believes there is an error in this listing will have an opportunity to contact the Commission's licensing facility in Gettysburg, Pennsylvania and provide corrected information.

FOR FURTHER INFORMATION CONTACT: Marty Liebman, Private Radio Bureau, (202) 634–2443.

SUPPLEMENTARY INFORMATION: The Federal Communications Commission will conduct a lottery on March 31, 1993 at 10 a.m. in room 856, 1919 M Street NW., Washington, DC for the purpose of selecting nationwide commercial 220–222 MHz band licensees. Applications for nationwide commercial frequencies in the 220–222 MHz band were filed in response to a Report and Order adopted March 14, 1991 in PR Docket No. 89–552, FCC 91–74, 56 FR 19598 (1991) (Report and Order). The Commission began accepting applications for nationwide commercial frequencies in the 220–222 MHz band starting on May 1, 1991 and ceased accepting such applications on May 24, 1991. A total of 140 applications for commercial nationwide licenses were received on May 1, 1991.

The Commission's Report and Order provided that applicants for nationwide commercial frequencies in the 220–222 MHz band would have to satisfy the requirements set forth in 47 CFR 90.713. Applicants for these frequencies, however, were not required, at the time of application, to submit the supporting information needed to satisfy these requirements. Instead, in accordance with the Memorandum Opinion and Order in this proceeding (Memorandum Opinion and Order, PR Docket No. 89–552, FCC 92–261, 57 FR 32448 (1992), Second Erratum, PR Docket No. 89–552, DA 92–1234, 57 FR 44339 (1992)), the Commission established November 19, 1992 as the date for nationwide commercial applicants to amend their applications to provide all certifications, schedules, and financial documentation required by 47 CFR 90.713. On October 1, 1992, the Commission issued a Public Notice (DA 92–1321, 57 FR 49475 (1992)) indicating that failure by an applicant to timely amend its nationwide commercial application with the required information would result in the automatic dismissal of the application. (See 47 CFR 1.961(b)).

The following eleven (11) applicants filed applications for nationwide commercial frequencies in the 220–222 MHz band on May 1, 1991, and either withdrew their application or failed to timely file the necessary documentation required by 47 CFR 90.713. These applications will not be included in the lottery scheduled for March 31, 1993.

Applicant

ARDIS Company
Chronos Tracking Systems, Ltd.
Cleartel Communications Mobile Operations Limited Partnership
Ronald H. Hyder
Millard V. Oakley
Petroleum Communications, Inc.
Potomac Corporation
Trimble Navigation, Ltd.
Union Pacific Railroad Company
Universal Portable Communications L. P.
Marilyn Warren Vandever

In addition, the application filed by GTE Mobile Communications, Incorporated (GTE) will not be included in the lottery because GTE is not eligible to be a licensee in the 220 MHz commercial nationwide service. See 47 CFR 90.703.

The following applicants filed application for nationwide commercial frequencies in the 220–222 MHz band on May 1, 1991 and timely filed all of the necessary documentation required by 47 CFR 90.713.

Applicant	ID Number
AAT RSA Company L P	001
ACC Network Corp	002
Advanced Mobilecomm Inc	003
Air Cable Limited Partnership	004
All American Communications Partners	005
American Telephone & Telegraph Co	006
Andersen Group Inc	007
Associated Information Services Corp	008
Autoinfo Inc	009
Bagley, Smith	010
BammComm Inc	011
Bandy III, William: Mizell, Kenneth dba 428 Cellular Associates	012
Bell Communications Inc	013
Bellwether Partners Inc	014
Blankenship, Elizabeth	015
Boyce, William J	016
C K Limited Partnership	017
Capital Communications Group	018
Cellular Data Inc	019
Century Radio Corp	020
Chronicle Publishing Company	021
Chukker National SMR Partnership	022
Clinton, Susan	023
Coast To Coast SMR Partnership	024
Columbia Communications Group	025
Comel 220, Inc	026
Comnet USA A General Partnership	027
Comtech Inc	028
Cone Jr, S. E	029
Consolidated Freightways Inc	030
Contra Costa SMR Partners	031
D & K Joint Venture	032
Delta Nationwide SMR Partnership	033
Dial Page Inc	034
Dirico, Frank	035
Dowdy 220 MHz Nationwide, Inc	036
ECHO General Partnership	037
Echo Group LP	038
Echo Two Way National Partners	039
Ericsson GE Mobile Communications Inc	040
Fleet Call Inc	041
Fleet Maintenance Inc	042
Florida Cellular RSA LP	043
Flynn, Barry B.: Joseph, Jerome E. dba F.G. Associates	044
Fonvu Partners IV	045
Fortification Two Way Partners	046
G and S Communications Inc	047
Glenayre Electronics Inc	048
Global Cellular Communications Inc	049
Goodman, Bill: Page, Carter dba G&P Partnership	050
Great Hopes, a Kentucky General Partnership	051
Hamiln, Bruce S. and Beaulieu, Roger dba Walnut Hill Associates	052
Harry H. Diamond Inc	053
Hartford Low Power Translator Inc	054
Heritage Two Way SMR Partnership	055
High Point Enterprises Inc	056
Horrigan, John J: Burka, James M.: Cohen, Robert dba MicCom Partners	057
Hughes, Kingdon R	058
JBSMR Inc	059
JDG Inc	060
John and James Pinto Partners	061
KMC Cellular Inc	062
KRSMR Inc	063
Kier Brothers Investment	064
L D Data Inc	065
LDG Inc	066
Larry Gladysz Group	067
Linney, Douglas A.: Chaudhuri, Bobby dba Nationwide Mobility	068
Linney, Warren T: Mehta, Vivek dba National Telephone	069
Lonesome Dove Communications Partners	070
MP Communications Partners	071
Maxcell Telecom Plus Inc	072
McDonald Investment Company Inc	073
McDonald Management Inc	074
McGraw Hill Inc	075
Memphis National Two Way Partners	076
Message Center Inc	077
Minerich Cellular Inc	078
Mobile Telecommunications Technologies Corp	079
Namaqua Limited Partnership	080
National Communications Group	081
National RSA Company	082
Nationwide PLMRS Group	083
Newsweb Corporation	084
O R Estman Inc	085
P&C Wireless Partners	086
PLMRS Narrowband Corp	087
Page America of New York, Inc	088
PageMart Inc	089
Paging Network of America Inc	090
Palmer Communications Incorporated	091
Petrucci, Gary: Kurtz, Gary dba Minnesota SMR Partnership	092
Proez, Inc	093
Providence Journal Company	094
Rockland SMR Group, Inc	095
Russell H. Fox: M3P Corporation dba 220 Phone LP	096
Security Trend Partners	097
Sentinel Corporation	098
Shiner Bock Group	099
Sinclair Broadcast Group Inc	100
Singh, Roy, and Patel Joint Venture	101
Smackover Nationwide SMR Partnership	102
Solomon, Harold: Levings Jr, Sanford dba Technium 220 General Partnership	103
St. John Nationwide Partnership	104
Stoneman Investor Partnership	105
Suburban Partners	106
Sun Telesystems Partners	107

Applicant	ID Number
Sun Wireless Partners	108
Sundown General Partnership	109
Sunseri, Jack A: Ramsey, Kenneth dba Metro Nationwide Communications	110
TT&P Communications Limited Partnership	111
Time Warner Entertainment Company LP	112
Trilogy Management Ltd	113
Tucker, Elizabeth: Ramsey, Sara dba Continental Nationwide Communications	114
220 Commercial Inc	115
U S Central Inc	116
UPS Telecommunications Inc	117
USA Mobile Radio	118
UV Corp.	119
Utility Cooperative Communications Service	120
Venable Cellular Inc	121
WHF Inc	122
Warren Cellular Inc	123
Warren, Jean M	124
Warren, Stephen K	125
Warren, William Johnston	126
Whelan, Donald B	127
Word SMR Inc	128

These applicants will be included in the lottery scheduled for March 31, 1993. In this regard, applications for nationwide commercial frequencies in the 220–222 MHz band were accepted on a "first come, first served" basis, with all applications received on the same day being considered filed at the same time. As set forth in 47 CFR 90.717, there are four nationwide, commercial channel blocks (*i.e.*, Channels 21–25, Channels 26–30, Channels 151–155, and Channels 156–160). There are consequently more applications for licenses than can be accommodated with available frequencies. Accordingly pursuant to 47 CFR 90.711(a), the applications for nationwide commercial frequencies in the 220–222 MHz band are subject to lottery proceedings, which will be conducted in accordance with the provisions of 47 CFR 1.972.

As indicated, the lottery to be held on March 31, 1993, will be for the purpose of selecting licensees for nationwide commercial 220–222 MHz channels from among the 128 applicants that filed applications on the first day that applications were accepted for filing, *i.e.*, May 1, 1991, and that submitted timely-filed documentation as required by 47 CFR 90.713. Any applicant that timely filed an application for nationwide commercial frequencies in the 220–222 MHz band and the subsequent amendment as required by 47 CFR 90.713, but whose name is not shown on the list of applicants to be included in the March 31, 1993 lottery, must provide persuasive evidence that such an application and appropriate amendments were timely filed. At a minimum, an example of persuasive evidence would be United States Postal Service "Certified Mail" receipts stapled to a copy of both the application and associated amendments thereto. Additionally, pursuant to 47 CFR 1.41, any interested party may file information with the Commission that may reflect on the suitability of an applicant to be a licensee. Only allegations pertaining to applicants later granted tentative selectee status will be investigated and all allegations directed toward a given tentative selectee will be resolved prior to the issuance of a license to that tentative selectee. Corrections to the listing of applicants to be included in the lottery and information relating to the suitability of these applicants must be received by the Commission within 30 days of the publication of this Public Notice in the Federal Register at the following address by 4:30 PM EST: Licensing Division, Private Radio Bureau, Federal Communications Commission, P.O. Box 3441, Gettysburg, PA 17325–7245.

As shown above, a three-digit Identification (ID) Number is associated with each application to be included in the March 31, 1993 lottery. The lottery will be conducted by selecting four three-digit numbers, with the numbers generated through the use of forced-air ping pong balls. The first three-digit number drawn will identify the applicant that will be granted tentative selectee status for licensing on Channels 21–25; the second three-digit number drawn will identify the applicant that will be granted tentative selectee status for licensing on Channels 26–30; the third three-digit number drawn will identify the applicant that will be granted tentative selectee status for licensing on Channels 151–155; the fourth three-digit number drawn will identify the applicant that will be granted tentative selectee status for licensing on Channels 156–160.

For a more complete discussion of lottery procedures, see FCC INST 1159.1, released August 13, 1992. Additional information regarding the applicants for this lottery session may be obtained from the Private Radio Bureau's Consumer Assistance Branch at (717) 337–1212. Procedural questions regarding the lottery may be directed to Donna Searcy at (202) 632–6410.

Beverly G. Baker,

Acting Chief, Private Radio Bureau.

[FR Doc. 93–3963 Filed 2–18–93; 8:45 am]

BILLING CODE 6712–01–M

FEDERAL FINANCIAL INSTITUTIONS EXAMINATION COUNCIL

Community Reinvestment Act

Interagency Questions and Answers

AGENCY: Federal Financial Institutions Examination Council.

ACTION: Adoption of the Interagency Questions and Answers regarding community reinvestment.

SUMMARY: The Consumer Compliance Task Force of the Federal Financial Institutions Examination Council (FFIEC) today has adopted revised Interagency Questions and Answers Regarding Community Reinvestment. To help financial institutions meet their responsibilities under the Community Reinvestment Act (CRA) and to increase public understanding of the regulations and examination procedures, the staffs of the Federal Reserve Board, the Federal Deposit Insurance Corporation, the Office of Thrift Supervision, and the Office of the Comptroller of the Currency have prepared answers to the most commonly asked questions about community reinvestment. The Questions and Answers should not be regarded as official interpretations. Their purpose is to provide useful guidance to agency personnel, financial institutions and the public.

The document includes four new questions, which address the following:

- The agencies' emphasis on lending and investment rather than documentation (23);
- State CRA performance evaluations and the public file (13);
- Outside activities and CRA performance (22); and
- Institutions' targeting specific ethnic groups and CRA considerations (5).

The Questions and Answers are now organized by subject matter with the previously assigned numbers appearing in parentheses. Questions and answers previously numbered 4 and 5 were deleted because they were basically a reiteration of the regulation, and those previously numbered 11 and 19 were deleted because other questions and answers address the same issues. Other minor modifications were made as necessary to improve clarity.

ADDRESSES: Federal Financial Institutions Examination Council, 2100 Pennsylvania Avenue, NW., suite 200, Washington, DC 20037.

FOR FURTHER INFORMATION CONTACT: Debra D. Clements, Compliance Analyst, Federal Financial Institutions Examination Council, 2100 Pennsylvania Avenue, NW., suite 200.

Washington, DC 20037. Specific agency related questions should be directed to the following: Federal Reserve Board—Divison of Consumer and Community Affairs (202) 452–2631; Federal Deposit Insurance Corporation—Office of Consumer Affairs (202) 898–3536, or Division of Special Supervision (202) 898–7155; Office of Thrift Supervision—Specialized Programs (202) 906–6000; Office of the Comptroller of the Currency—Compliance Management (202) 874–4446.

EFFECTIVE DATE: February 17, 1993.

SUPPLEMENTARY INFORMATION:

Interagency Questions and Answers Regarding CRA Scope of the CRA's Coverage

1. (26) Are there any "regulated financial institutions" that are excluded from the scope of CRA?

In general, the CRA defines a "regulated financial institution" as one that meets the definition of an insured depository institution, under Section 3 of the Federal Deposit Insurance Act. However, the banking agency CRA "Interpretation 101" (12 CFR 25.101, 12 CFR 228.100, and 12 CFR 345.101) excludes from CRA requirements certain institutions that serve solely as correspondent banks, trust companies, or clearing agents. The banking agencies have also excluded from CRA certain financial institutions whose activities are limited to providing cash management controlled disbursement services. The rationale used in allowing certain financial institutions to be excluded from the scope of CRA is that these institutions are only incidentally involved, if at all, in granting credit to the public. The financial supervisory agencies periodically review the applicability of CRA to other types of financial institutions.

2. (1) What does the term "office" mean as used in the regulation?

Office refers generally to a facility of an institution that accepts deposits, including an electronic deposit facility. It does not include purely administrative offices, agencies, loan production offices or facilities used, for example, only for the check collection process. In delineating a local community, an institution need not consider shared electronic deposit facilities, unless otherwise directed by the appropriate financial supervisory agency.

3. (24) How are bank and savings association holding companies affected by the CRA?

The CRA applies to applications filed by holding companies to merge or to acquire banks and savings associations. When decisions on such applications are made, the Federal Reserve Board and the Office of Thrift Supervision will consider the CRA records of all the bank or savings association subsidiaries of the applicant holding company. The parent holding company need not prepare a CRA Statement or public notice, or maintain public comment files; but are encouraged to ensure that subsidiary financial institutions have expanded CRA statements that include a description of the institution's CRA performance. The holding company must conform to the requirements of the applicable regulation for media notices of corporate applications filed to acquire a bank or savings association.

Delineation of the CRA Community

4. (2) What is meant by "local community" and how detailed a map should be used to portray it?

The term "local community" refers to the contiguous area surrounding each office or group of offices of an institution. Although the geographic areas served by an institution may vary with the type of service, only one local community is to be delineated for a particular office or group of offices. Any map which depicts an institution's local community or communities with reasonable clarity may be used. The map need not show each street in the community, nor be prepared professionally by a cartographer. Low- and moderate-income neighborhoods should not be specifically indicated on the map. The community delineation, however, must not unreasonably exclude such neighborhoods. An institution may delineate several local communities on one map. However, each local community, comprising the entire community, must be delineated with sufficient clarity so that the areas included in those local communities are obvious. If the entire community is made up of more than a few local communities, or the local communities are separated by significant distances, it may be easier and clearer to use a separate map for each local community. Furthermore, the locations of the institution's offices need not be shown on the maps.

5. (new) Can a financial institution identify a specific ethnic group, rather than a geographic area, as its delineated community; and can this financial institution target a specific ethnic group in designing and marketing products and services?

As indicated in the answer to Question four of this series, an institution must geographically delineate its local community(ies) on the basis of the locations of its offices. A delineation that does not have a geographic basis would be inconsistent with the CRA and implementing regulation. (The only permissible exception involves an institution's ability to delineate a "military community" in addition to the geographic communities surrounding its offices.)

If an institution can maintain compliance with the Fair Housing and Equal Credit Opportunity Acts (and this may not always be possible), it may direct the marketing of its products and services to one or more specific ethnic groups. However, institutions that target a single ethnic group, while having offices located in multi-ethnic areas, often exhibit significant lending disparities and unsatisfactory CRA performance.

6. (3) How should an institution deal with low- and moderate-income neighborhoods in its local community delineation?

The CRA regulation requires that low- and moderate-income neighborhoods not be unreasonably excluded from a delineation of the local community. Institutions are expected to be generally aware of low- and moderate-income neighborhoods within their community, without undertaking extensive research. No attempt need be made to distinguish between low-income neighborhoods and moderate-income neighborhoods. If institutions desire further information about low- and moderate-income neighborhoods, they should consult such sources as state and local community development and planning agencies.

The CRA Statement

7. (6) If an institution is prepared to offer particular types of credit only at some of its offices in a local community, should those types of credit be listed on the CRA Statements of all of its offices in that community?

Yes. Because the institution is willing to extend that type of credit to any creditworthy borrower in the community, the institution should list the same types of credit on the CRA Statement available at each office within a particular local community even though a prospective borrower at one office may be referred to another when seeking to make application. The institution should recognize, however, that public complaints may arise

because of such practices; and the financial supervisory agencies will have to decide whether the practice significantly discourages applications for such credit or otherwise adversely affects the institution's CRA performance.

The CRA Public Notice

8. (13) Are there any requirements relating to the size and placement of the Community Reinvestment Act Notice?

The notice must be placed in the public lobby of the financial institution but the size and placement may vary. For example, if the notice takes the form of a poster, the poster must be placed within the lobby where it will be seen by customers and be of sufficient size to be easily read from a normal distance. If the notice is provided in the form of a brochure, a supply of such brochures printed in easily read type and placed where they will be noticed will suffice.

The CRA and Public Comment

9. (14) What information and avenues of communication are available to members of a community who are concerned about the CRA performance of financial institutions in their community?

Financial institutions are encouraged to communicate with members of their community. The CRA regulations require financial institutions to make their CRA Statement and the public CRA Performance Evaluation available to the public. The statement contains a copy of the Community Reinvestment Act Notice which must be placed in the offices of all financial institutions. The notice states that the public may write to the financial institution or the appropriate supervisory agency about the institution's performance in helping to meet community credit needs.

The public may also review letters received by the financial institution regarding its CRA performance and the public CRA Performance Evaluation prepared by the institution's financial supervisory agency. Announcements of CRA-covered applications may be obtained by writing to the institution's financial supervisory agency. Anyone may comment on the filing of an application by writing to the appropriate financial supervisory agency listed either in the applicant's newspaper notice or its CRA notice. The financial supervisory agencies have varying comment periods for applications. Therefore, any questions about the comment period should be directed to the financial supervisory agency. Comments received within the appropriate period will be considered by the financial supervisory agency in the application process.

10. (9) Are all signed, written CRA comment letters to be placed in the public comment file?

The regulations state that the institution must put into a public comment file, all signed, written comments relating to the CRA Statement or to the institution's performance in helping to meet community credit needs. The only exceptions are comments that reflect adversely on the reputation of any person, or which would violate a law. The institution must use its own judgment in deciding which comments should be placed in the public comment file. Signed, written comments which might harm a person's reputation should be retained in a confidential file for inspection by the examiner.

Comments received by a financial supervisory agency will be on file at that agency. Those comments are also available to the public unless the Freedom of Information Act prohibits their disclosure.

11. (10) If a letter is addressed in part to an institution's overall CRA performance, but contains information which is harmful to an individual or violates a law, should the institution withhold the entire letter from the public file?

The institution may do so. Alternatively, the statements which reflect adversely on an individual or violate a law may be deleted from the letter and the balance included in the public file. In any event, the entire original letter should be retained in a confidential file for inspection by the examiner.

12. (21) In assessing an institution's CRA performance, does an examiner consider and evaluate information outside of the institution being examined?

Yes, an examiner should seek and consider any information that is necessary to complete a fair and accurate picture of the institution's CRA performance. Contacts will be made, for example, with persons who have commented on an institution's performance, local officials, local business owners, community residents, real estate brokers, or others who may be able to provide information concerning local financial institutions in helping to meet those needs. In addition, if the examiner believes that the institution's description of its community is unreasonable, the examiner may review the delineations of other, similar institutions in the community.

13. (new) May a State-chartered financial institution place a copy of a community reinvestment performance evaluation prepared by a State regulatory agency in the comment file(s) maintained for public inspection pursuant to Federal rules?

A signed written comment, that addresses an institution's CRA Statement or performance in helping to meet the credit needs of its community, received from the public during the past two years should be placed in the public comment file. For the purposes of the Federal financial supervisory agencies' CRA implementing rules, any comment not prepared by the institution itself or its Federal financial supervisory agency may be considered to be from "the public." Institutions should consider the answers to Questions 10 and 11 of this series if they are concerned that the disclosure of information received from a State regulatory agency or other source would violate Federal rules. Institutions are also advised to consult with their State regulatory agencies if they are unsure of what material received from the State is intended for public availability.

14. (12) Must the institution respond to any or all comments received from the public?

There is no requirement that the institution respond. However, the institution may find it helpful to respond to certain comments to foster a dialogue with members of the community or to present relevant information to a financial supervisory agency. If any institution responds to a letter in the public comment file, the response must also be placed in that file, unless it reflects adversely on any person or violates a law.

15. (8) How should past and current CRA Statements and public comment files be made available to the public in each office of an institution, particularly an institution that has offices in more than one local community?

An institution that has offices in more than one local community should maintain current CRA Statements for all its local communities at its head office and current CRA Statements for each local community in each office of the institution in that local community, except off-premises electronic deposit facilities. Any CRA Statements that were in effect during the past two years should be retained with the public comment letters in the public comment file. A comment file for the entire institution must be maintained at the head office, and a comment file

pertaining to a particular local community must be retained at a designated office in that community. A copy of the most recent public CRA Performance Evaluation prepared by the institution's Federal financial supervisory agency must be maintained in each of the public comment files.

Assessing the Record of Performance Under the CRA

16. (12) Will an institution's performance in helping to meet community credit needs be assessed even if an institution does not intend to make an application covered by the CRA?

Yes. While Congress directed that the approval or rejection of applications be used to encourage community reinvestment by banks and savings associations on a safe and sound basis, it also sought to have each financial supervisory agency use its examination process "to encourage" institutions to be sensitive to their responsibilities to help meet local credit needs.

17. (16) Will activities in addition to lending be considered in the CRA assessment?

Yes. Although the principal focus is on lending, the financial supervisory agencies recognize that other activities and efforts contribute toward the CRA's goals. The financial supervisory agencies will consider the extent to which an institution's activities foster local community revitalization. For example, the agencies will consider the institution's purchase of state or municipal bonds or involvement through investment or other contributions in a local community development project. The agencies also will consider activities such as:

- Efforts to establish meaningful dialogue with community members concerning credit needs of the community;
- The institution's record of opening and closing branches and offering services (including noncredit services);
- Marketing and special credit-related programs to make community members aware of credit services offered at its offices;
- The extent of participation by the institution's board of directors in formulating policies and reviewing its CRA performance.

18. (29) In addition to traditional direct lending activities, what activities can financial institutions consider in meeting obligations and responsibilities under the Community Reinvestment Act?

The answer to this question is primarily designed to provide guidance to regulated financial institutions that are not "full service" providers. The guidance herein can also be utilized by full service institutions as a means of augmenting their traditional lending activities as part of a comprehensive CRA program. Some of these activities may require prior financial supervisory agency approval.

The following are some nontraditional activities that financial institutions may consider to help meet their responsibilities under the Community Reinvestment Act.

Debt Investments and Related Securities

- Purchase of mortgage-backed securities or collateral trust notes from lenders or other community development finance intermediaries serving primarily low- and moderate-income areas or persons.
- Purchase of housing, community and economic development loans, or participations in loans or loan pools from other financial institutions, state and local government agencies, nonprofit community-based development corporations, community loan funds, or other community development intermediaries originating loans to help meet the needs of low- and moderate-income persons or small businesses.
- Purchase of government guaranteed loans (or participations in pools representing such loans) made to low- and moderate-income persons, or to small farm and small business owners, such as:

—SBA guaranteed loans or loan pools;
—FmHA guaranteed farm, business or housing loans;
—FHA insured loans;
—EDA (U.S. Economic Development Administration) guaranteed loans;
—State housing or economic development agency guaranteed loans.

- Purchase of state and local government agency housing mortgage revenue bonds or industrial revenue bonds.

Equity Investments

Some activities to serve community credit needs may be carried out through certain federal and state supervisory agencies' programs to promote community development investments. Such investments are required to serve predominantly a public or community purpose. Activities that might be carried out directly by an institution under these programs include:

- Purchase of limited partnership shares to provide the equity financing for public purpose projects such as construction of low- and moderate-income housing or provision of small business seed capital. General partners could be quasi-public or private, for-profit or nonprofit organizations;
- Investment in the stock of a public purpose corporation, either for-profit or nonprofit, chartered to carry out activities to benefit low- and moderate-income areas and residents or small businesses.

For certain banks and holding companies, the formation of, or investment in, a community development corporation may, in accordance with applicable laws and restrictions, be a viable way to address certain credit needs in the communities of banks or holding company subsidiary banks.

Limited service or specialized banks in a holding company that owns a community development corporation operating in the bank's community could take advantage of the CDC's activities in planning and executing its own CRA responsibilities. Activities that could be carried out through a community development corporation subsidiary include, for example:

- Acting as a general partner, joint venture partner and/or equity investor in projects that have a clear public purpose, particularly projects focused on assisting low- and moderate-income housing or small business, and on the redevelopment of deteriorating or blighted areas where private developers are not interested in the opportunities;
- Carrying out a program to provide needed technical assistance on financial matters to small businesses or public-purpose organizations;
- Financing and managing a public-purpose revolving loan fund to provide financing that cannot normally be provided through the private market. An example is a fund to lend monies for pre-development costs involved in evaluating and packaging projects for financing by financial institutions and/or public sector investors.

An activity that could be carried out by the institution, directly or through establishment of a separate corporation, is an investment in a wholly-owned or multi-bank/multi-investor Small Business Investment Company (SBIC) or Minority Enterprise Small Business Investment Company (MESBIC) licensed by the U.S. Small Business Administration.

Other Services and Activities

- Letters/lines of credit to community-based organizations, private developers, nonprofit development corporations or other community

finance intermediaries to support financing of low- and moderate-income housing or small business development.

• Highly targeted corporate contributions (monetary and in-kind) to support the personnel, facilities, marketing and finance activities of community-based nonprofit organizations or other financial intermediaries that explicitly focus on helping meet credit needs of low- and moderate-income persons or small businesses. Such organizations might include:

—Nonprofit, neighborhood development corporations;
—Housing and other credit counseling organizations;
—Community foundations and loan funds;
—Neighborhood Housing Services organizations;
—SBA 504 Certified Development Companies.

• Technical assistance to community-based nonprofit groups, state and local government agencies and community development finance and secondary market intermediaries which focus on helping to meet the credit needs of low- and moderate-income persons or areas, or small businesses. Examples of such technical assistance activities might include:

—Serving on the board of directors or loan review committee;
—Development of loan application and underwriting standards;
—Development of loan processing systems;
—Development of secondary market vehicles or programs;
—Marketing assistance, including development of advertising and promotions, publications, workshops and conferences;
—Training for staff and management;
—Accounting/bookkeeping services;
—Fund-raising, including soliciting or arranging investments;
—Consumer education to broaden knowledge and use of credit and deposit services.

• Assistance to community development credit unions in the institution's local community through, for example, provision of technical assistance or stable deposits to fund the credit union's lending.

19. (15) Must an institution document that is actually extending the types of credit listed in its CRA statement as being offered in the local community?

The CRA regulations do not require the maintenance of any documentation other than the public comment files, CRA Statements and CRA Notices. However, an institution's level of CRA performance depends far more on its credit activities than it does on strict regulatory compliance. In assessing CRA performance, examiners will review:

• Any analyses of the geographic distribution of the institution's credit extensions, applications, and denials prepared by the institution;

• Disclosure statements, aggregation tables and Loan Application Registers, if the institution is subject to the Home Mortgage Disclosure Act;

• Periodic financial reports filed by the institution with its supervisory agency;

• Records such as credit files required to be maintained under Federal Reserve Regulation B implementing the Equal Credit Opportunity Act;

• Other loan documentation that may be required under agency regulations and other information that the institution may have compiled for internal reporting and monitoring purposes;

• Marketing materials such as advertising copy.

The documentation that the agencies expect to be maintained is primarily that which is useful to the institution's own management in administering a successful CRA program.

20. (30) When assessing CRA performance, do the financial supervisory agencies consider a financial institutions' lending, investment, development and general support activities outside of the institution's delineated community?

In general, the assessment of an institution's performance under CRA focuses on its record in helping to meet credit needs within its delineated community. The agencies are aware, however, that financial institutions may organize, support, or use a wide variety of programs, organizational mechanisms or intermediaries that help finance such things as low- and moderate-income housing, small and minority businesses and other community projects on a statewide, regional or even national basis. Although these programs or mechanisms may be available to support loans and investments within an institution's delineated community, they often provide the bulk of their financial support in other geographical [illegible].

Under certain circumstances, the agencies will give positive consideration in assessing CRA performance for active participation by a financial institution in such programs and mechanisms, even where most of all of the financing provided may ultimately benefit low- and moderate-income borrowers or neighborhoods located outside of the institution's delineated community. In determining whether and to what extent positive consideration will be given, the agencies assess the activities undertaken in the context of an institution's overall CRA program. Where such participation augments or complements an overall CRA program that is directly responsive to the credit needs in an institution's delineated community, it will be considered favorably in reaching an overall CRA conclusion. However, such activities and involvements will be insufficient to compensate for an otherwise deficient record of addressing the credit needs of an institution's delineated community.

Examples of such programs or intermediary organizations (other than traditional direct lending) are:

• Lending consortia or loan pools that provide community development financing and technical assistance for low- and moderate-income housing, small and minority business development, or other neighborhood revitalization projects;

• Multi-investor community development corporations;

• Limited partnerships that invest in low- and moderate-income housing;

• Secondary market corporations and programs which explicitly target loans for low- and moderate-income housing, small and minority businesses, or small farms;

• Quasi-public housing, community development or economic development finance corporations in which state or local government agencies participate, often with financial institutions or other contributors;

• State bond programs for housing, community and economic development, or public infrastructure projects;

• Public or private intermediaries which provide loan guarantees or other credit enhancements used by financial institutions to support community development lending and investment;

• Capital investment, loan participation and other co-ventures undertaken with minority and women-owned financial institutions.

These and similar vehicles help institutionalize and support community development lending and investment. In general, they enhance the capacity of financial institutions to help meet community credit needs, including those of low- and moderate-income neighborhoods.

21. (20) May an institution use a policy of making certain loans only to existing customers, without

adversely affecting its CRA performance?

In examining an institution, the financial supervisory agencies will pay particular attention to any restrictions placed on the availability of those types of credit that an institution has indicated on its CRA Statement that it would extend in its local community. Examiners will focus on whether any such restrictions have or would have a significantly greater impact on low- and moderate-income neighborhoods. In every case, examiners will consider:

- The business rationale for adopting a particular policy;
- Whether other policies would serve the same business purpose with less adverse impact;
- The relative ease of becoming a customer eligible for credit under the restriction;
- Whether the institution has adopted a policy of limiting certain loans to customers as a temporary response to tight money conditions or as a permanent policy.

Loans available on any restrictive basis should be listed on the CRA Statement with the restrictions noted. However, the agencies recognize that institutions occasionally make certain specialized loans to "good" customers. This type of spot lending activity need not be listed on the CRA Statement.

Any restrictive lending policies or practices found to be discriminatory on a prohibited basis will have a substantial adverse impact on an institution's CRA performance.

22. (new) What criteria do examiners use to determine whether a director's, officer's or employee's outside activities contribute to an institution's CRA performance? What criteria do the examiners use to determine whether an institution's charitable donations contribute to its CRA performance?

To contribute to an institution's CRA performance, an activity or charitable donation should fall into one of the following categories:

- It resulted in the sharing of information about the institution's lending services;
- Information was obtained regarding the community's credit needs;
- Community members were informed about how to get or use credit;
- The activity or charitable donation assisted in providing credit services or information to the community;
- The activity or donation assisted a community development or redevelopment effort.

23. (new) Some parties have commented that the financial supervisory agencies emphasize assessment criteria relating to the CRA process over results such as lending. What is the current emphasis of the agencies in their supervisory efforts?

The principal focus of the financial supervisory agencies and the activity most encouraged through an examination continues to be lending and other activities within the community that result in extensions of credit that help meet identified credit needs. The answers to Questions 20 and 30 in this series also address this issue. A conclusion that performance is satisfactory or better generally requires that the community delineation is reasonable; that credit extensions are consistent with the capacity of the institution and the identified needs of the community; and that lending activity reflects a reasonable penetration of all segments of the community, including its low- and moderate-income neighborhoods.

When the above characteristics are not found to be present in an institution's reinvestment record, the underlying causes identified by the financial supervisory agencies' examiners are likely related to deficiencies in the institution's community reinvestment process. Agency recommendations for improving the institution's CRA performance usually involve:

- Oversight by the board of directors and management;
- The establishment of goals and objectives;
- Community outreach, product development and marketing;
- Management and employee training;
- Regular monitoring of the institution's progress and performance.

Process-oriented corrective measures should be implemented to make the institution more responsive to local credit needs on a regular, ongoing basis. However, no level of emphasis by an institution on the CRA process can make upon for a seriously deficient record of lending and investment in the community.

24. (7) What is a "small" business or farm?

For CRA purposes, the term "small" refers to the absolute size of the business and farm rather than the relative size in their industries. Because a major concern of CRA is that all creditworthy borrowers have reasonable access to loans from banks and savings associations, small businesses and farms generally are viewed as those which do not have access to regional and national credit markets and must rely on their local lending institutions for credit.

25. (31) What effect would an institution's selling loans it has originated within its delineated community have on the institution's CRA performance?

The agencies have found that the sale of loans in the secondary market enhances CRA performance where such sales enable an institution to recycle funds for origination of additional loans within its delineated community.

Where loans are part of a comprehensive CRA program designed to ascertain and help meet credit needs within the institution's delineated community, such loans clearly help demonstrate CRA performance, whether or not they are ultimately sold on the secondary market. To ensure that appropriate consideration under CRA is given for loans sold, however, institutions should consider retaining information concerning when and where the loans were originated.

26. (27) To what extent will a "regulated financial institution" which is subject to statutory and/or regulatory constraints that prevent it from operating as a "full service" financial institution be expected to meet CRA performance requirements?

The institution has an affirmative obligation to seek out ways consistent with its permitted activities to assist, directly or indirectly, in helping to meet the credit needs identified in its local community, with appropriate attention to low- and moderate-income neighborhoods. As indicated in the answers to Questions 20 and 21 of this series, many services other than direct credit services can be developed to benefit the local community in a manner consistent with the intent of the CRA. Currently the financial supervisory agencies are reviewing the applicability of CRA to financial institutions that have statutory restrictions placed on their loan or deposit activities.

The CRA implementing regulations of the Federal financial supervisory agencies include twelve factors to be considered in assessing CRA performance. Every institution's overall CRA performance record should compare favorably, consistent with its resources and capabilities, with the issues expressed through these twelve factors. A financial institution's inability to provide specific credit products or services because of statutory or regulatory limitations does not preclude a positive CRA performance evaluation.

An institution's board of directors should assure that CRA performance is an integral part of the institution's business strategy. Expected activities will include, at minimum, meeting the basic obligations to define a local community, to ascertain the credit needs within that Community, and to demonstrate responsiveness, directly or indirectly, to the needs identified.

27. (28) What do the financial supervisory agencies expect from institutions that have voluntarily limited or specialized their services to target particular markets?

Such an institution has the same continuing and affirmative obligation as a "full service" institution to help meet the credit needs of its entire local community, consistent with safe and sound operations. An institution's self-imposed service or market limitations may not be used as justification for a failure to define its local community or to help, directly or indirectly, meet the credit needs within that community, including low- and moderate-income neighborhoods.

Whether or not an institution operates as a "full service" entity is not a determining factor in evaluating its CRA performance. Every institution should be able to demonstrate that it is fulfilling its CRA responsibilities, either within the context of its chosen service specialties or in other ways. The final measure of CRA performance is in the credit benefits accruing to the institution's local community as a result of that institution's activities, irrespective of the vehicle by which those credit benefits are provided.

28. (18) How will the agencies "encourage" institutions to help meet the credit needs of their local communities?

Encouragement will be provided in four ways. First, within the limits of the agencies' resources, their staffs will provide information and technical assistance and will meet with representatives of industry and the management of individual institutions to explain the CRA, regulations, and examination procedures. This exchange of information will help institutions understand the purposes of the CRA and how the financial supervisory agencies implement the act. Second, as part of each CRA examination, financial supervisory agency staff will discuss with management their findings about the institution's CRA performance. Where appropriate, the financial supervisory agency staff may suggest ways in which the institution can improve its performance. Third, in decisions on applications, where CRA is a material factor, the agencies will publicly comment on an institution's record of performance. Fourth, the financial supervisory agencies believe that the availability the public CRA Performance Evaluations serve as an additional encouragement for institutions to help meet local credit needs on an ongoing basis.

The Effect of an Institution's CRA Performance on Applications

29. (22) What sanctions are available to the financial supervisory agencies under the CRA?

A poor CRA performance record may result in denial of corporate application. The financial supervisory agencies may also use the full range of their enforcement powers to ensure compliance with the requirements of the CRA regulation, including preparing a CRA Statement, maintaining public comment files and making them available, and providing the CRA Notice. In addition, widespread, repeat/uncorrected, or otherwise substantive violations of anti-discrimination laws and regulations are significant adverse factors in an institution's CRA performance record, and they will prompt enforcement actions under the Equal Credit Opportunity Act, Fair Housing Act, or other applicable fair lending rules.

30. (23) Are applications for electronic deposit facilities covered by the CRA?

Generally, such applications are covered. The financial supervisory agencies have different rules regarding the processing of applications for electronic deposit facilities, and institutions should, therefore, consult their financial supervisory agency before filing.

31. (25) How does the CRA affect applications by banks and savings associations that are subsidiaries of holding companies?

Applications by a bank or savings association that is a subsidiary of a holding company will be treated by the financial supervisory agencies in the same manner as those filed by any bank or savings association. Only the CRA record of the applying bank or savings association and the activities of their subsidiaries will be taken into account. The bank or savings association may request, however, that the financial supervisory agency consider the contribution of any of the bank's or savings association's non-depository affiliates in helping to meet the credit needs of the community or communities of the applicant bank or savings association. For example, if the applicant bank or savings association has an affiliate community development corporation operating in the same community as the applicant, the applicant may ask that the contributions of that corporation in helping to meet the credit needs of the particular community be considered by the financial supervisory agency in assessing the overall CRA record of the applicant.

Dated: February 12, 1993.

Joe M. Cleaver,

Executive Secretary, Federal Financial Institutions Examination Council.

[FR Doc. 93–3856 Filed 2–18–93; 8:45 am]

BILLING CODE 6210-01-M

FEDERAL MARITIME COMMISSION

Agreement(s) Filed; City of Los Angeles/Distribution and Auto Services, Inc. (DAS) Preferential Berth Assignment Agreement, et al.

The Federal Maritime Commission hereby gives notice of the filing of the following agreement(s) pursuant to section 5 of the Shipping Act of 1984.

Interested parties may inspect and obtain a copy of each agreement at the Washington, DC Office of the Federal Maritime Commission, 800 North Capitol Street, NW., 9th Floor. Interested parties may submit comments on each agreement to the Secretary, Federal Maritime Commission, Washington, DC 20573, within 10 days after the date of the **Federal Register** in which this notice appears. The requirements for comments are found in § 572.603 of title 46 of the Code of Federal Regulations. Interested persons should consult this section before communicating with the Commission regarding a pending agreement.

Agreement No.: 224–200100–005.

Title: City of Los Angeles/Distribution and Auto Services, Inc. (DAS) Preferential Berth Assignment Agreement.

Parties:

The City of Los Angeles,
Distribution and Auto Services, Inc. (DAS).

Synopsis: The modification proposes that all storage charges be retained by DAS and that only wharfage charges be contributed toward Incremental Monthly Payment ("IMP") and Minimum Annual Guarantee ("MAG"). The modification also proposes that the IMP and MAG be adjusted proportionately to changes in the tariff rates for wharfage on self-propelled motor vehicles set up on wheels and that areas used for automobile storage

purposes located outside the permit premises be chargeable at $.105 per square foot per each thirty-day period of use.

Agreement No.: 224–200486–001.
Title: City of Los Angeles/Pasha Properties, Inc. Terminal Agreement.
Parties:

City of Los Angeles, by its Board of Harbor Commissioners
Pasha Properties, Inc. ("Pasha").

Synopsis: This modification permits Pasha to retain storage charges accrued at its assigned premises; provides for the assignment of additional storage space and compensation payable for that space at other than assigned premises; and establishes a compensation settlement procedure for any difference in the amounts received and the amounts payable.

Agreement: 224–200609–002.
Title: Jacksonville Port Authority and Columbus Line, Inc. Marine Terminal Agreement.
Parties:

The Jacksonville Port Authority ("JPA")
Columbus Line, Inc.

Synopsis: The agreement stipulates that a crane rate for Columbus Line will remain at the 1991–1992 rate level until a new crane has been installed and is operational.

Agreement: 202–011375–004
Title: Trans-Atlantic Agreement.
Parties:

A.P. Moller-Maersk Line
Polish Ocean Lines
Orient Overseas Container Line (UK) Ltd.
DSR-Senator Joint Service
P&O Containers Limited
Cho Yang Shipping Co.
Atlantic Container Line AB
Sea-Land Service, Inc.
Nedlloyd Lijnen BV
Hapag Lloyd AG
Mediterranean Shipping Co.

Synopsis: The proposed amendment permits any party to charter space in pure car carrier or pure car/truck carrier vessels ("PCCs") to another carrier operating PCCs in the trade, or participating in a joint service, pursuant to such an agreement which transports uncontainerized cargo in PCCs.

Dated: February 16, 1993.

By Order of the Federal Maritime Commission.

Ronald D. Murphy,

Assistant Secretary.

[FR Doc. 93–3881 Filed 2–18–93; 8:45 am]

BILLING CODE 6730–01–M

Security for the Protection of the Public Financial Responsibility To Meet Liability Incurred for Death or Injury to Passengers or Other Persons on Voyages; Issuance of Certificate (Casualty)

Notice is hereby given that the following have been issued a Certificate of Financial Responsibility to Meet Liability Incurred for Death or Injury to Passengers or Other Persons on Voyages pursuant to the provisions of section 2, Public Law 89–777 (46 U.S.C. 817(d)) and the Federal Maritime Commission's implementing regulations at 46 CFR part 540, as amended:

Sun Line Cruises Inc., Sun Line Limited and Stella Cruises Limited
One Rockefeller Plaza, Suite 315
Vessel: STELLA SOLARIS

Dated: February 16, 1993.

Joseph C. Polking,

Secretary.

[FR Doc. 93–3961 Filed 2–18–93; 8:45 am]

BILLING CODE 6730–01–M

Security for the Protection of the Public Indemnification of Passengers for Nonperformance of Transportation; Issuance of Certificate (Performance)

Notice is hereby given that the following have been issued a Certificate of Financial Responsibility for Indemnification of Passengers for Nonperformance of Transportation pursuant to the provisions of section 3, Public Law 89–777 (46 U.S.C. 817(e)) and the Federal Maritime Commission's implementing regulations at 46 CFR part 540, as amended:

Sun Line Cruises Inc., Sun Line Limited and Stella Cruises Limited
One Rockefeller Plaza, Suite 315, New York, NY 10020
Vessel: STELLA SOLARIS

Dated: February 16, 1993.

Joseph C. Polking,

Secretary.

[FR Doc. 93–3962 Filed 2–18–93; 8:45 am]

BILLING CODE 6730–01–M

[Docket No. 93–04]

Best Homeware, Inc., v. Orient Overseas Container Line, Inc., et al.; Notice of Filing of Complaint and Assignment

Notice is given that a complaint filed by Best Homeware, Inc. ("Complainant") against Orient Overseas Container Line, Inc. and Orient Overseas Container (USA), Inc. (collectively "OOCL") and Asia North America Eastbound Rate Agreement ("ANERA" herein collectively referred to as "Respondents") was served February 12, 1993. Complainant alleges that Respondent engaged in violations of sections 8 (c) and (d) and 10(a)(1), (b)(1), (2), (3), (4), (5), (6), (8), (9), (10), (11) and (12), by luring Complainant, through Respondents' fraud and misrepresentation, into a sham service contract specifically designed and intended to circumvent the lower IA tariffs of ANERA's members and failing to guarantee Complainant assured space or a defined level of service, and by continued fraudulent conduct in assuring Complainant that its shipments under the IA tariff constituted full compliance of the service contract's minimum volume requirements.

This proceeding has been assigned to the Office of Administrative Law Judges. Hearing in this matter, if any is held, shall commence within the time limitations prescribed in 46 CFR 502.61. The hearing shall include oral testimony and cross-examination in the discretion of the Presiding Officer only upon proper showing that there are genuine issues of material fact that cannot be resolved on the basis of sworn statements, affidavits, depositions, or other documents or that the nature of the matter in issue is such that an oral hearing and cross-examination are necessary for the development of an adequate record. Pursuant to the further terms of 46 CFR 502.61, the initial decision of the Presiding Officer in this proceeding shall be issued by February 11, 1994, and the final decision of the Commission shall be issued by June 13, 1994.

Ronald D. Murphy,

Assistant Secretary.

[FR Doc. 93–3878 Filed 2–18–93; 8:45 am]

BILLING CODE 6730–01–M

FEDERAL RESERVE SYSTEM

Commerce Bancshares, Inc; Formations of; Acquisitions by; and Mergers of Bank Holding Companies; Correction

This notice corrects a previous notice (FR Doc. 93-2486) published at page 6971 of the issue for Wednesday, February 3, 1993.

Under the Federal Reserve Bank of Kansas City heading, the entry for Commerce Bancshares, Inc. is revised to read as follows:

A. Federal Reserve Bank of Kansas City (John E. Yorke, Senior Vice President) 925 Grand Avenue, Kansas City, Missouri 64198:

1. Commerce Bancshares, Inc., Kansas City, Missouri, and its subsidiary, CBI Security Corp., Kansas City, Missouri; to acquire Republic Bancshares, Inc., Neosho, Missouri, and thereby indirectly acquire Security State Bank, Republic, Missouri. In connection with this application, CBI Security Corp. has applied to become a bank holding company by merging with Republic Bancshares, Inc.

Board of Governors of the Federal Reserve System, February 12, 1993.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 93-3889 Filed 2-18-93; 8:45 am]

BILLING CODE 6210-01-F

Meridian Bancorp, Inc., et al.; Notice of Applications to Engage de novo in Permissible Nonbanking Activities

The companies listed in this notice have filed an application under § 225.23(a)(1) of the Board's Regulation Y (12 CFR 225.23(a)(1)) for the Board's approval under section 4(c)(8) of the Bank Holding Company Act (12 U.S.C. 1843(c)(8)) and § 225.21(a) of Regulation Y (12 CFR 225.21(a)) to commence or to engage *de novo*, either directly or through a subsidiary, in a nonbanking activity that is listed in § 225.25 of Regulation Y as closely related to banking and permissible for bank holding companies. Unless otherwise noted, such activities will be conducted throughout the United States.

Each application is available for immediate inspection at the Federal Reserve Bank indicated. Once the application has been accepted for processing, it will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the question whether consummation of the proposal can "reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency, that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices." Any request for a hearing on this question must be accompanied by a statement of the reasons a written presentation would not suffice in lieu of a hearing, identifying specifically any questions of fact that are in dispute, summarizing the evidence that would be presented at a hearing, and indicating how the party commenting would be aggrieved by approval of the proposal.

Unless otherwise noted, comments regarding the applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than March 10, 1993.

A. Federal Reserve Bank of Philadelphia (Thomas K. Desch, Vice President) 100 North 6th Street, Philadelphia, Pennsylvania 19105:

1. Meridian Bancorp, Inc., Reading, Pennsylvania; to engage *de novo* through its subsidiary, Meridian Securities, Inc., Reading, Pennsylvania, in providing securities brokerage services in combination with investment advisory services pursuant to §§ 225.25(b)(4) and 225.25(b)(15)(ii) of the Board's Regulation Y.

B. Federal Reserve Bank of Cleveland (John J. Wixted, Jr., Vice President) 1455 East Sixth Street, Cleveland, Ohio 44101:

1. Huntington Bancshares Incorporated, Columbus, Ohio; to engage *de novo* through its subsidiary, The Huntington National Life Insurance Company, Columbus, Ohio, acting as principal, agent or broker for home mortgage redemption insurance that is directly related to an extension of credit by the bank holding company or its subsidiaries and is limited to ensuring repayment of the outstanding balance due on the extension of credit in the event of death, disability, or involuntary unemployment of the debtor pursuant to § 225.25(b)(8)(i) of the Board's Regulation Y.

Board of Governors of the Federal Reserve System, February 12, 1993.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 93-3891 Filed 2-18-93; 8:45 am]

BILLING CODE 6210-01-F

Community Independent Bancorp, Inc., et al.; Formations of; Acquisitions by; and Mergers of Bank Holding Companies

The companies listed in this notice have applied for the Board's approval under section 3 of the Bank Holding Company Act (12 U.S.C. 1842) and § 225.14 of the Board's Regulation Y (12 CFR 225.14) to become a bank holding company or to acquire a bank or bank holding company. The factors that are considered in acting on the applications are set forth in section 3(c) of the Act (12 U.S.C. 1842(c)).

Each application is available for immediate inspection at the Federal Reserve Bank indicated. Once the application has been accepted for processing, it will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank or to the offices of the Board of Governors. Any comment on an application that requests a hearing must include a statement of why a written presentation would not suffice in lieu of a hearing, identifying specifically any questions of fact that are in dispute and summarizing the evidence that would be presented at a hearing.

Unless otherwise noted, comments regarding each of these applications must be received not later than March 15, 1993.

A. Federal Reserve Bank of Cleveland (John J. Wixted, Jr., Vice President) 1455 East Sixth Street, Cleveland, Ohio 44101:

1. Community Independent Bancorp, Inc., Maysville, Kentucky; to become a bank holding company by acquiring 100 percent of the voting shares of Bank of May's Lick, May's Lick, Kentucky.

B. Federal Reserve Bank of St. Louis (Randall C. Sumner, Vice President) 411 Locust Street, St. Louis, Missouri 63166:

1. Bridgeport Bancorp, Inc., Bridgeport, Illinois; to become a bank holding company by acquiring at least 80 percent of the voting shares of First National Bank of Bridgeport, Bridgeport, Illinois.

2. Union Planters Corporation, Memphis, Tennessee; to acquire 100 percent of the voting shares of Erin Bank & Trust Company, Erin, Tennessee.

Board of Governors of the Federal Reserve System, February 12, 1993.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 93-3890 Filed 2-18-93; 8:45 am]

BILLING CODE 6210-01-F

Jon R. Stuart, et al.; Change in Bank Control Notices; Acquisitions of Shares of Banks or Bank Holding Companies; Correction

This notice corrects a previous notice (FR Doc. 93-3122) published at page 7892 of the issue for Wednesday, February 10, 1993.

Under the Federal Reserve Bank of Kansas City heading, the entry for John R. Stuart is revised to read as follows:

A. Federal Reserve Bank of Kansas City (John E. Yorke, Senior Vice President) 925 Grand Avenue, Kansas City, Missouri 64198:

1. Jon R. Stuart, Tulsa, Oklahoma, to acquire an additional 7.63 percent for a total 31.31 percent; and E.R. Albert, Jr., living trust, Tulsa, Oklahoma, to acquire an additional 6.79 percent for a total of 26.05 percent; and E.R. Albert, Jr., Trustee of the E.R. Albert, Jr., living trust, Tulsa, Oklahoma, to acquire an

additional 6.79 percent for a total of 26.05 percent of the voting shares of Tulbancorp, Inc., Tulsa, Oklahoma, and thereby indirectly acquire Bank of Tulsa, Tulsa, Oklahoma.

Board of Governors of the Federal Reserve System, February 12, 1993.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 93–3892 Filed 2–18–93; 8:45 am]

BILLING CODE 6210–01–F

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

Conference on Chemical Contaminants in Seafood; Notice of Public Meeting

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of public meeting.

SUMMARY: The Food and Drug Administration's (FDA) Office of Seafood in the Center for Food Safety and Applied Nutrition will hold a conference on contaminants in seafood—both marine and fresh water species. The purpose of this conference is to bring together representatives of Federal and State regulatory agencies, researchers, consumers, industry representatives, and others from throughout the United States to discuss issues relating to chemical contaminants in seafood. FDA will use the information that it obtains from the conference as part of its risk assessment, risk management, and risk communication activities involving chemical contaminants in seafood.

DATES: The conference will be held on Wednesday and Thursday, April 21 and 22, 1993, 8 a.m. to 5 p.m. Those interested in making oral presentations must submit one page abstracts of their presentations by March 15, 1993. Written comments and supplementary information by May 21, 1993.

ADDRESSES: The conference will be held at the Washington, DC Renaissance Hotel, 999 Ninth St. NW., Washington, DC 20001–9000. Written comments and one page abstracts should be submitted to Sharon Kirksey (address below).

FOR FURTHER INFORMATION CONTACT: Regarding oral presentations at the conference, written comments, one page abstracts, and all preregistration and hotel accommodation arrangements:

Sharon Kirksey, Crosspaths Management Systems, Inc., Two Wisconsin Circle, suite 660, Chevy Chase, MD 20815, 301–654–4600, FAX 301–654–6334.

Regarding any other questions relating to the conference:

Gregory Cramer, Center for Food Safety and Applied Nutrition (HFS–416), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, 202–254–3888.

Those persons interested in attending this conference should call the contact person listed above to preregister. Early registration is suggested because space for the conference is limited. The closing date for preregistration is March 15, 1993. Limited onsite registration will be allowed each day at 8 a.m., provided attendance does not exceed a maximum of 250 people.

SUPPLEMENTARY INFORMATION: FDA is sponsoring a conference on chemical contaminants in seafood. The agency is holding this conference to obtain information on a broad range of issues involving chemical contaminants, including the significance of the quality of the environment from which the seafood is harvested, and the potential for harm from consuming seafood containing contaminants at levels below those presently considered to be of concern. The Office of Seafood believes that this conference will provide it with significant new information on chemical contaminants in seafood. The meeting is not intended to establish consensus or to formulate agency policy. In addition, the conference is not intended to consider substances, such as additives and microbiological and natural toxins, that are not chemical contaminants.

Information that is gathered at the meeting and that is received in written comments will be used by FDA in risk assessment, risk management, and risk communication activities involving chemical contaminants in seafood.

The conference will include presentations on Federal, regional, and local monitoring efforts with respect to chemical contaminants in seafood. Workgroup sessions will address risk assessment, risk management, and risk communication. Because of time constraints, these workgroup sessions will occur concurrently.

Interested persons are encouraged to provide written comments on issues involving chemical contaminants in seafood, such as risk assessment, risk management, and risk communication as well as the related issues of monitoring priorities, toxicology, exposure, chemical form, breakdown products, area closures, bans, advisories, tolerances, action levels, effectiveness of warnings, and other related topics. Written comments should be submitted to Sharon Kirksey (address above) by May 21, 1993.

Part of the meeting will be devoted to presentations by conference attendees. Persons wishing to make oral presentations on any of the topics outlined above will be permitted up to 10 minutes each during the general session if they submit a one page camera–ready abstract of their presentation by March 15, 1993. Audiovisual equipment will be available for these presenters as needed. Presenters will be scheduled on a first-come, first-served basis as time for presentations permits.

State representatives, members of industry, representative of professional and consumer groups, academics, and any other person interested in issues involving chemical contaminants in seafood are invited to attend. A nominal registration fee of $50 will be charged to help defray expenses. In addition, a block of rooms has been reserved at the meeting site for conference attendees at government rates of $110 single and $130 double, inclusive of District of Columbia sales and occupancy tax.

Persons wishing to make oral presentations must submit written comments and abstracts of their presentations by March 15, 1993. All other written comments, including supplementary information developed by those wishing to make presentations, should be submitted by May 21, 1993. All written comments and abstracts should be submitted to Sharon Kirksey (address above). Audiovisual need requests, as well as any questions about the meeting, registration, and hotel reservation requests, should also be directed to Sharon Kirksey. Any other questions related to the conference should be directed to Gregory Cramer (address above).

Dated: February 12, 1993.

Michael R. Taylor,

Deputy Commissioner for Policy.

[FR Doc. 93–3964 Filed 2–16–93; 3:50 pm]

BILLING CODE 4160–01–F

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of the Assistant Secretary for Community Planning and Development

[Docket No. N–93–1917; FR–3350–N–19]

Federal Property Suitable as Facilities To Assist the Homeless

AGENCY: Office of the Assistant Secretary for Community Planning and Development, HUD.

ACTION: Notice.

SUMMARY: This Notice identifies unutilized, underutilized, excess, and surplus Federal property reviewed by HUD for suitability for possible use to assist the homeless.

ADDRESSES: For further information, contact James N. Forsberg, room 7262, Department of Housing and Urban Development, 451 Seventh Street SW., Washington, DC 20410; telephone (202) 708–4300; TDD number for the hearing- and speech-impaired (202) 708–2565 (these telephone numbers are not toll-free), or call the toll-free title V information line at 1–800–927–7588.

SUPPLEMENTARY INFORMATION: In accordance with 56 FR 23789 (May 24, 1991) and section 501 of the Stewart B. McKinney Homeless Assistance Act (42 U.S.C. 11411), as amended, HUD is publishing this Notice to identify Federal buildings and other real property that HUD has reviewed for suitability for use to assist the homeless. The properties were reviewed using information provided to HUD by Federal landholding agencies regarding unutilized and underutilized buildings and real property controlled by such agencies or by GSA regarding its inventory of excess or surplus Federal property. This Notice is also published in order to comply with the December 12, 1988 Court Order in *National Coalition for the Homeless* v. *Veterans Administration*, No. 88–2503–OG (D.D.C.).

Properties reviewed are listed in this Notice according to the following categories: Suitable/available, suitable/unavailable, suitable/to be excess, and unsuitable. The properties listed in the three suitable categories have been reviewed by the landholding agencies, and each agency has transmitted to HUD:

(1) Its intention to make the property available for use to assist the homeless,

(2) Its intention to declare the property excess to the agency's needs, or

(3) A statement of the reasons that the property cannot be declared excess or made available for use as facilities to assist the homeless.

Properties listed as suitable/available will be available exclusively for homeless use for a period of 60 days from the date of this Notice. Homeless assistance providers interested in any such property should send a written expression of interest to HHS, addressed to Judy Breitman, Division of Health Facilities Planning, U.S. Public Health Service, HHS, room 17A–10, 5600 Fishers Lane, Rockville, MD 20857; (301) 443–2265. (This is not a toll-free number.) HHS will mail to the interested provider an application packet, which will include instructions for completing the application. In order to maximize the opportunity to utilize a suitable property, providers should submit their written expressions of interest as soon as possible. For complete details concerning the processing of applications, the reader is encouraged to refer to the interim rule governing this program, 56 FR 23789 (May 24, 1991).

For properties listed as suitable/to be excess, that property may, if subsequently accepted as excess by GSA, be made available for use by the homeless in accordance with applicable law, subject to screening for other Federal use. At the appropriate time, HUD will publish the property in a Notice showing it as either suitable/available or suitable/unavailable.

For properties listed as suitable/unavailable, the landholding agency has decided that the property cannot be declared excess or made available for use to assist the homeless, and the property will not be available.

Properties listed as unsuitable will not be made available for any other purpose for 20 days from the date of this Notice. Homeless assistance providers interested in a review by HUD of the determination of unsuitability should call the toll free information line at 1–800–927–7588 for detailed instructions or write a letter to James N. Forsberg at the address listed at the beginning of this Notice. Included in the request for review should be the property address (including zip code), the date of publication in the **Federal Register**, the landholding agency, and the property number.

For more information regarding particular properties identified in this Notice (i.e., acreage, floor plan, existing sanitary facilities, exact street address), providers should contact the appropriate landholding agencies at the following addresses:

Corps of Engineers: Pete Digel, Headquarters, Army Corps of Engineers, Attn: CERE–MC, room 4224, 20 Massachusetts Ave. NW., Washington, DC 20314–1000; (202) 272–1753;

U.S. Navy: John J. Kane, Deputy Division Director, Dept. of Navy, Real Estate Operations, Naval Facilities Engineering Command, 200 Stovall Street, Alexandria, VA 22332–2300; (703) 325–0474;

U.S. Air Force: John Carr, Realty Specialist, HQ–AFBDA/BDR, Pentagon, Washington, DC 20330–5130; (703) 614–9692;

Dept. of Veterans Affairs: Michael Reynolds, Management Analyst, Dept. of Veterans Affairs, room 414 Lafayette Bldg., 811 Vermont Ave. NW., Washington, DC 20420; (202) 233–8474;

Dept. of Transportation: Ronald D. Keefer, Director, Administrative Services & Property Management, DOT, 400 Seventh St. SW., room 10319, Washington, DC 20590; (202) 366–4246;

Dept. of Interior: Lola D. Knight, Property Management Specialist, Dept. of Interior, 1849 C St. NW., Mailstop 5512–MIB, Washington, DC 20240; (202) 208–4080;

Dept. of Energy: Tom Knox, Realty Specialist, AD223.1, 1000 Independence Ave. SW., Washington, DC 20585; (202) 586–1191; (These are not toll-free numbers).

Dated: February 12, 1993.

Jacquie M. Lawing,

Deputy Assistant Secretary for Economic Development.

Suitable/Available Properties

Buildings (by State)

Alabama

Bldg. TU–13
Millers Ferry Lock and Dam
Route 1, Box 102
Camden Co: Wilcox AL 36726–
Landholding Agency: COE
Property Number: 319011549
Status: Unutilized
Comment: 1000 sq. ft.; 1 story frame residence; needs minor repair; most recent use—lock tender's dwelling.

Bldg. TU–22
Selden Lock and Dam
Route 1
Sawyerville Co: Hale AL 36776–
Landholding Agency: COE
Property Number: 319011551
Status: Unutilized
Comment: 1080 sq. ft.; 1 story frame residence; needs minor repair; most recent use—lock tender's dwelling.

Bldg. TU–21
Selden Lock and Dam
Route 1
Sawyerville Co: Hale AL 36776–
Landholding Agency: COE
Property Number: 319011552
Status: Unutilized
Comment: 1080 sq. ft.; 1 story frame residence; needs minor repair; most recent use—lock tender's dwelling.

Bldg. TU–23
Selden Lock and Dam
Route 1
Sawyerville Co: Hale AL 36776–
Landholding Agency: COE
Property Number: 319011553
Status: Unutilized
Comment: 1080 sq. ft.; 1 story frame residence; needs minor repair; most recent use—lock tender's dwelling.

Bldg. TU–24
Selden Lock and Dam
Route 1

Sawyerville Co: Hale AL 36776–
Landholding Agency: COE
Property Number: 319011554
Status: Unutilized
Comment: 1080 sq. ft.; 1 story frame residence; needs minor repair; most recent use—lock tender's dwelling.

Bldg. TU–15
Coffeeville Lock and Dam
Star Route Box 77
Blandon Springs Co: Choctaw AL 36919–
Landholding Agency: COE
Property Number: 319011556
Status: Unutilized
Comment: 1547 sq. ft.; 1 story frame residence; most recent use—lock tender's dwelling.

Bldg. 19, VA Medical Center
Tuskegee Co: Macon AL 36083–
Landholding Agency: VA
Property Number: 979220006
Status: Underutilized
Comment: Portion of a 5320 sq. ft. 4-story structure.

California

199 Military Family Housing
Savannah Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240001
Status: Excess
Base closure Number of Units: 398
Comment: 1405 sq. ft., 2-family duplexes, 1-story woodframe stucco, 144 units scheduled to be vacated 1/31/93; 254 units scheduled to be vacated 10/1/93.

Utility Bldg.
Savannah Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240002
Status: Excess
Base closure Number of Units: 1
Comment: 237 sq. ft., 1-story woodframe stucco, most recent use-gas meter bldg., scheduled to be vacated 10/93.

100 Military Family Housing
Cabrillo Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240003
Status: Excess
Base closure Number of Units: 684
Comment: 2550 sq ft. to 3024 sq. ft., 16-duplexes, 72-four plexes, and 12-six plexes totaling 684 units, 3 to 4 bedrooms, 1 to 2 story, scheduled to be vacated 10/94.

49 Detached Carports
Cabrillo Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240004
Status: Excess
Base closure Number of Units: 49
Comment: size varies, 1-story concrete block wall, scheduled to be vacated 10/94.

Convenience Store
Cabrillo Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240005
Status: Excess
Base closure Number of Units: 1
Comment: 4830 sq. ft., 1-story woodframe stucco, scheduled to be vacated 10/94.

Youth Center
Cabrillo Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240006
Status: Excess
Base closure Number of Units: 1
Comment: 6576 sq. ft., 1-story woodframe stucco, scheduled to be vacated 10/94.

Utility Bldg.
Cabrillo Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240007
Status: Excess
Base closure Number of Units: 1
Comment: 416 sq. ft., 1-story woodframe stucco, most recent use-gas meter building, scheduled to be vacated 10/94.

Child Care Center & Storage
Cabrillo Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240008
Status: Excess
Base closure Number of Units: 2
Comment: 6641 sq. ft. child care center and 400 sq. ft. storage bldg. 1-story woodframe stucco, scheduled to be vacated 10/94.

Maintenance Bldg.
Cabrillo Project
Long Beach Naval Station
Long Beach Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240009
Status: Excess
Base closure Number of Units: 1
Comment: 900 sq. ft., 1-story steel panel bldg., scheduled to be vacated 10/94.

Laundromat
Cabrillo Project
Long Beach Naval Station
Los Angeles Co: Los Angeles CA 90801–
Landholding Agency: Navy
Property Number: 779240010
Status: Excess
Base closure Number of Units: 1
Comment: 1320 sq. ft. each unit, 1-story woodframe stucco, scheduled to be vacated 10/94.

24 Bldgs.
San Pedro Complex, Taper Avenue
Long Beach Naval Station
Los Angeles Co: Los Angeles CA
Landholding Agency: Navy
Property Number: 779240021
Status: Excess
Base closure Number of Units: 48
Comment: 2550 sq. ft. each unit, 2-unit family residences, 1–2 story, totaling 48 units, scheduled to be vacated 9/30/94.

24 Bldgs.
San Pedro Complex, Taper Avenue
Long Beach Naval Station
Los Angeles Co: Los Angeles CA
Landholding Agency: Navy
Property Number: 779240021
Status: Excess
Base closure Number of Units: 48
Comment: 2550 sq. ft. each unit, 2-unit family residences, 1–2 story, totaling 48 units, scheduled to be vacated 9/30/94.

23 Bldgs.
San Pedro Complex, Taper Avenue
Long Beach Naval Station
Los Angeles Co: Los Angeles CA
Landholding Agency: Navy
Property Number: 779240022
Status: Excess
Base closure Number of Units: 92
Comment: 5980 sq. ft. each unit, 4-unit family residences, 1–2 story, totaling 92 units, scheduled to be vacated 9/30/94.

16 Detached Carports
San Pedro Complex, Taper Avenue
Long Beach Naval Station
Los Angeles Co: Los Angeles CA
Landholding Agency: Navy
Property Number: 779240023
Status: Excess
Base closure Number of Units: 16
Comment: Holds 4 to 16 vehicles, concrete block frame, 1-story, scheduled to be vacated 9/30/94.

16 Detached Carports
San Pedro Complex, Taper Avenue
Long Beach Naval Station
Los Angeles Co: Los Angeles CA
Landholding Agency: Navy
Property Number: 779240023
Status: Excess
Base closure Number of Units: 16
Comment: Holds 4 to 16 vehicles, concrete block frame, 1-story, scheduled to be vacated 9/30/94.

Bldg. 20—VA Medical Center
Wilshire & Sawtelle Blvds.
Los Angeles Co: Los Angeles CA 90073–
Landholding Agency: VA
Property Number: 979210003
Status: Unutilized
Comment: 8758 gross square ft., one story wooden, requires complete restoration meeting standards of national preservation laws and guidelines.

Bldg. 13, VA Medical Center
Wilshire & Sawtelle Blvds.
Los Angeles Co: Los Angeles CA 90073–
Landholding Agency: VA
Property Number: 979220001
Status: Underutilized
Comment: portion of 66,165 sq. ft. bldg., needs major rehab, no util., pres. of asbestos, in historic district, potential to be hazardous due to storage of radioactive material nearby.

Bldg. 156, VAMC
Wilshire & Sawtelle Blvds.
Los Angeles Co: Los Angeles CA 90073–
Landholding Agency: VA
Property Number: 979230015
Status: Underutilized
Comment: Portion of 39,454 sq. ft. bldg., presence of asbestos, needs rehab, seismic reinforcement deficiencies, in his. district, potentially hazardous due to nearby radioactive material.

Florida

Bldg. CN–3
1651 S. Franklin Lock Road

Alva Co: Lee FL 33920–
Landholding Agency: COE
Property Number: 319130006
Status: Unutilized
Comment: 1500 sq. ft., 1 story concrete block residence, off-site use only.

Bldg. CN–43
Port Mayaca Lock and Spillway
Okeechobee Waterway
Port Mayaca Co: Martin FL 33438–
Location: Located approx. 9 mi n/o Canal Pt. at the intersection of US 441 and SR 76
Landholding Agency: COE
Property Number: 319210004
Status: Unutilized
Comment: 1700 sq. ft., 1 story concrete block/stucco structure, possible asbestos, off-site use only.

Hawaii

Bldg. S87, Radio Trans, Fac.
Lualualei, Naval Station, Eastern Pacific
Wahiawa Co: Honolulu HI 96786–3050
Landholding Agency: Navy
Property Number: 779240011
Status: Unutilized
Comment: 7566 sq. ft., 1-story, needs rehab, most recent use—storage, off-site use only.

Bldg. 466, Radio Trans. Fac.
Lualualei, Naval Station, Eastern Pacific
Wahiawa Co: Honolulu HI 96786–3050
Landholding Agency: Navy
Property Number: 779240012
Status: Unutilized
Comment: 100 sq. ft., 1-story, needs rehab, most recent use—gas station, off-site use only.

Indiana

Bldg. 01, Monroe Lake
Monroe Cty. Rd. 37 North to Monroe Dam Rd.
Bloomington Co: Monroe IN 47401–8772
Landholding Agency: COE
Property Number: 319140002
Status: Unutilized
Comment: 1312 sq. ft., 1 story brick residence, off-site use only.

Bldg. 02, Monroe Lake
Monroe Cty, Rd. 37 North to Monroe Dam Rd.
Bloomington Co: Monroe IN 47401–8772
Landholding Agency: COE
Property Number: 319140003
Status: Unutilized
Comment: 1312 sq. ft., 1 story brick residence, off-site use only.

Bldg. 140, VAMC
East 38th Street
Marion Co: Grant IN 46952–
Landholding Agency: VA
Property Number: 979230007
Status: Underutilized
Comment: 60 sq. ft., concrete block bldg., most recent use—trash house, access restrictions.

Kentucky

Green River Lock & Dam #3
Rochester Co: Butler KY 42273–
Location: SR 70 west from Morgantown, KY., approximately 7 miles to site.
Landholding Agency: COE
Property Number: 319010022
Status: Unutilized
Comment: 980 sq. ft.; 2 story wood frame; two story residence; potential utilities; needs major rehab.

Maine

Naval Air Station
Transmitter Site
Old Bath Road
Brunswick Co: Cumberland ME 04053–
Landholding Agency: Navy
Property Number: 779010110
Status: Underutilized
Comment: 7,270 sq ft., 1 story bldg, most recent use—storage, structural deficiencies.

Bldg. 523—Transmitter Site
Naval Air Station
East Brunswick Co. Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230002
Status: Excess
Comment: 7,270 sq. ft., 1-story bldg., most recent use—storage, needs rehab on 66 acres of land.

Bldg. 524—Transmitter Site
Naval Air Station
East Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230003
Status: Excess
Comment: 384 sq. ft., 1-story, most recent use—storage, needs rehab.

Bldg. 332, Naval Air Station
Topsham Annex
Brusnwick Co: Sagadahoc ME
Landholding Agency: Navy
Property Number: 779240013
Status: Excess
Comment: 1,248 sq. ft., 1-story, most recent use—office building, off-site use only.

Bldg. 333, Naval Air Station
Topsham Annex
Brusnswick Co: Sagadahoc ME
Landholding Agency: Navy
Property Number: 779240014
Status: Excess
Comment: 12,672 sq. ft., 2-story, most recent use—office building, off-site use only.

New Mexico

Old Helium Plant
Gallup Co: McKinley NM 87301–
Location: 1/4 mile north of Gallup, adjacent to Old US Highway 666.
Landholding Agency: Interior
Property Number: 619010002
Status: Excess
Comment: 7,653 sq. ft., 1 story office and warehouse space, possible asbestos, on 4.65 acres, secured area with alternate access.

North Carolina

Dwelling 1
USCG Coinjock Housing
Coinjock Co: Currituck NC 27923–
Landholding Agency: DOT
Property Number: 879120083
Status: Unutilized
Comment: one story wood residence, periodic flooding in garage and utility room occurs in heavy rainfall.

Dwelling 2
USCG Coinjock Housing
Coinjock Co: Currituck NC 27923–
Landholding Agency: DOT
Property Number: 879120084
Status: Unutilized
Comment: one story wood residence, periodic flooding in garage and utility room occurs in heavy rainfall.

Dwelling 3
USCG Coinjock Housing
Coinjock Co: Currituck NC 27923–
Landholding Agency: DOT
Property Number: 879120085
Status: Unutilized
Comment: one story wood residence, peribdic flooding in garage and utility room occurs in heavy rainfall.

Ohio

Barker Historic House
Willow Island Locks and Dam
Newport Co: Washington OH 45768–9801
Location: Located at lock site, downstream of lock and dam structure
Landholding Agency: COE
Property Number: 319120018
Status: Unutilized
Comment: 1600 sq. ft. bldg. with ½ acre of land, 2 story brick frame, needs rehab, on Natl Register of Historic Places, no utilities, off-site use only.

Pennsylvania

Mahoning Creek Reservoir
New Bethlehem Co: Armstrong PA 16242–
Landholding Agency: COE
Property Number: 319210008
Status: Unutilized
Comment: 1015 sq. ft., 2 story brick residence, off-site use only.

Bldg. 25—VA Medical Center
Delafield Road
Pittsburgh Co: Allegheny PA 15215–
Landholding Agency: VA
Property Number: 979210001
Status: Unutilized
Comment: 133 sq. ft., one story brick guard house, needs rehab.

South Carolina

Bldg. 1
J. S. Thurmond Dam and Reservoir
Clarks Hill Co: McCormick SC 29821–
Location: ½ mile east of Resource Managers Office.
Landholding Agency: COE
Property Number: 319011544
Status: Excess
Comment: 1900 sq. ft.; 1 story masonry frame; possible asbestos; most recent use—storage.

Bldg. 2
J. S. Thurmond Dam and Reservoir
Clarks Hill Co: McCormick SC 29821–
Location: ½ mile east of Resource Managers Office.
Landholding Agency: COE
Property Number: 319011545
Status: Excess
Comment: 1900 sq. ft.; 1 story masonry frame; possible asbestos; most recent use—storage.

Bldg. 3
J.S. Thurmond Dam and Reservoir
Clarks Hill Co: McCormick SC 29821–
Location: ½ mile east of Resource Managers Office.
Landholding Agency: COE
Property Number: 319011546
Status: Excess

Comment: 1900 sq. ft.; 1 story masonry frame; possible asbestos; most recent use—storage.

Bldg. 4
J.S. Thurmond Dam and Reservoir
Clarks Hill Co: McCormick SC 29821–
Location: ½ mile east of Resource Managers Office.
Landholding Agency: COE
Property Number: 319011547
Status: Excess
Comment: 1900 sq. ft.; 1 story masonry frame; possible asbestos; most recent use—storage.

Bldg. 5
J.S. Thurmond Dam and Reservoir
Clarks Hill Co: McCormick SC
Location: ½ mile east of Resource Managers Office.
Landholding Agency: COE
Property Number: 319011548
Status: Excess
Comment: 1900 sq. ft.; 1 story masonry frame; possible asbestos; most recent use—storage.

Tennessee

Bldg. 16, VAMC Mountain Home
Johnson Co: Washington TN 37604–
Landholding Agency: VA
Property Number: 979220007
Status: Unutilized
Comment: 3215 sq. ft., 3-story wood frame residence, needs repair, subject to historic preservation requirements.

Texas

208 Off-base Capehart Housing
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210001
Status: Excess
Base closure Number of Units: 208
Comment: 1320 sq. ft., 1 story brick/wood frame, 2 bedrooms/1 bath, needs routine maintenance, scheduled to be vacated 10/93.

54 Off-base Family Housing
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210002
Status: Excess
Base closure Number of Units: 54
Comment: 1,000 to 2,000 sq. ft., 1 and 2 bedroom units, 1 and 2 story, brick/wood frame, routine maintenance required, scheduled to be vacated 10/93.

19 Off-base Capehart Housing
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210003
Status: Excess
Base closure Number of Units: 19
Comment: 1320 sq. ft., 1 story brick/wood frame, 1 and 2 bedrooms, needs routine maintenance, scheduled to be vacated 10/93.

3 Recreational Facilities
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210004
Status: Excess
Base closure Number of Units: 3
Comment: 2100 to 13900 sq. ft., 1 story, concrete masonry frame, needs routine maintenance, includes theatre, bowling, racquetball, scheduled to be vacated 10/93.

4 Dining Facilities
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210005
Status: Excess
Base closure Number of Units: 4
Comment: 6000 to 21900 sq. ft., 1 story, concrete masonry frame, needs routine maintenance, scheduled to be vacated 10/93.

5 Bachelor Quarters
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210006
Status: Excess
Base closure Number of Units: 5
Comment: 16800 to 62200 sq. ft., 3 story, metal/brick frame, needs routine maintenance, scheduled to be vacated 10/93.

9 Administration Buildings
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210007
Status: Excess
Base closure Number of Units: 9
Comment: 1300 to 29500 sq. ft., 1 and 2 story, concrete masonry frame, needs routine maintenance, scheduled to be vacated 10/93.

Hospital (clinic)
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210008
Status: Excess
Base closure Number of Units: 1
Comment: 31000 sq. ft., 1 story, brick/concrete masonry frame, needs routine maintenance, scheduled to be vacated 10/93.

4 Miscellaneous Facilities
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210009
Status: Excess
Base closure Number of Units: 4
Comment: 900 to 55600 sq. ft., 2 story, concrete masonry frame, needs routine maintenance, scheduled to be vacated 10/93.

4 Warehouses
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210010
Status: Excess
Base closure Number of Units: 4
Comment: 800 to 40300 sq. ft., 1 story, concrete masonry frame, needs routine maintenance, used for storage, scheduled to be vacated 10/93.

16 Industrial Facilities
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210011
Status: Excess
Base closure Number of Units: 16
Comment: 200 to 10900 sq. ft., 1 story, metal/concrete masonry frame, needs routine maintenance, scheduled to be vacated 10/93.

3 Fire/Security Facilities
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210012
Status: Excess
Base closure Number of Units: 3
Comment: 5533 sq. ft., 1 story, wood/concrete masonry frame, needs routine maintenance, scheduled to be vacated 10/93.

5 Air Traffic Control Facs.
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210013
Status: Excess
Base closure Number of Units: 5
Comment: 3200 sq. ft., 1 story, concrete masonry frame, needs routine maintenance, scheduled to be vacated 10/93.

3 Aircraft Related Facilities
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210014
Status: Excess
Base closure Number of Units: 3
Comment: 42000 to 89300 sq. ft., 2 story, concrete masonry/metal frame, needs routine maintenance, used for storage/aircraft maintenance, scheduled to be vacated 10/93.

Virginia

Housing
Rt. 637—Gwynnville Road
Gwynn Island Co: Mathews VA 23066–
Landholding Agency: DOT
Property Number: 879120082
Status: Unutilized
Comment: 929 sq. ft., one story residence.

Admin. Bldg.
Group Eastern Shores
Coast Guard Station, South Main Street
Chinoteague Co: Accomack VA 23336–1510
Landholding Agency: DOT
Property Number: 879230006
Status: Unutilized
Comment: 3795 sq. ft., 1-story wood structure, off-site use only, scheduled to be vacated 6/93.

Repair Shop
Group Eastern Shores
Coast Guard Station, South Main Street
Chinoteague Co: Accomack VA 23336–1510
Landholding Agency: DOT
Property Number: 879230007
Status: Unutilized
Comment: 3025 sq. ft., 1-story wood structure, off-site use only, scheduled to be vacated 6/93.

Wisconsin

Former Lockmaster's Dwelling
Cedar Locks
4527 East Wisconsin Road
Appleton Co: Outagamie WI 54911–

Landholding Agency: COE
Property Number: 319011524
Status: Unutilized
Comment: 1224 sq. ft.; 2 story brick/wood frame residence; needs rehab; secured area with alternate access.

Former Lockmaster's Dwelling
Appleton 4th Lock
905 South Lowe Street
Appleton Co: Outagamie WI 54911–
Landholding Agency: COE
Property Nubmer: 319011525
Status: Unutilized
Comment: 968 sq. ft.; 2 story wood frame residence; needs rehab.

Former Lockmaster's Dwelling
Kaukauna 1st Lock
301 Canal Street
Kaukauna Co: Outagamie WI 54131–
Landholding Agency: COE
Property Number: 319011527
Status: Unutilized
Comment: 1290 sq. ft., 2 story wood frame residence; needs rehab; secured area with alternate access.

Former Lockmaster's Dwelling
Appleton 1st Lock
905 South Oneida Street
Appleton Co: Outagamie WI 54911–
Landholding Agency: COE
Property Number: 319011531
Status: Unutilized
Comment: 1300 sq. ft.; potential utilities; 2 story wood frame residence; needs rehab; secured area with alternate access.

Former Lockmaster's Dwelling
Rapid Croche Lock
Lock Road
Wrightstown Co: Outagamie WI 54180–
Location: 3 miles southwest of intersection State Highway 96 and Canal Road.
Landholding Agency: COE
Property Number: 319011533
Status: Unutilized
Comment: 1952 sq. ft.; 2 story wood frame residence; potential utilities; needs rehab.

Former Lockmaster's Dwelling
Little KauKauna Lock
Little KauKauna
Lawrence Co: Brown WI 54130–
Location: 2 miles southeasterly from intersection of Lost Dauphin Road (County Trunk Highway "D") and River Street.
Landholding Agency: COE
Property Number: 319011535
Status: Unutilized
Comment: 1224 sq. ft.; 2 story brick/wood frame residence; needs rehab.

Former Lockmaster's Dwelling
Little Chute, 2nd Lock
214 Mill Street
Little Chute Co: Outagamie WI 54140–
Landholding Agency: COE
Property Number: 319011536
Status: Unutilized
Comment: 1224 sq. ft.; 2 story brick/wood frame residence; potential utilities; needs rehab; secured area with alternate access.

Bldg. 8
VA Medical Center
County Highway E
Tomah Co: Monroe WI 54660–
Landholding Agency: VA
Property Number: 979010056
Status: Underutilized
Comment: 2200 sq. ft., 2 story wood frame, possible asbestos, potential utilities, structural deficiencies, needs rehab.

Wyoming

Glendale Microwave Bldg.
Section 1
Cody Co: Park WY 82414–
Landholding Agency. Energy
Property Number: 419220001
Status: Excess
Comment: 223 sq. ft., metal frame, communication equipment bldg., limited utilities, off-site removal only.

Land (by State)

Alabama

VA Medical Center
VAMC
Tuskegee Co: Macon AL 36083–
Landholding Agency: VA
Property Number: 979010053
Status: Underutilized
Comment: 40 acres, buffer to VA Medical Center, potential utilities, undeveloped.

Arkansas

Parcel 01
DeGray Lake
Section 12
Arkadelphia Co: Clark AR 71923–9361
Landholding Agency: COE
Property Number: 319010071
Status: Unutilized
Comment: 77.6 acres

Parcel 02
DeGray Lake
Section 13
Arkadelphia Co: Clark AR 71923–9361
Landholding Agency: COE
Property Number: 319010072
Status: Unutilized
Comment: 198.5 acres

Parcel 03
DeGray Lake
Section 18
Arkadelphia Co: Clark AR 71923–9361
Landholding Agency: COE
Property Number: 319010073
Status: Unutilized
Comment: 50.46 acres

Parcel 04
DeGray Lake
Section 24, 25, 30 and 31
Arkadelphia Co: Clark AR 71923–9361
Landholding Agency: COE
Property Number: 319010074
Status: Unutilized
Comment: 236.37 acres

Parcel 05
DeGray Lake
Section 16
Arkadelphia Co: Clark AR 71923–9361
Landholding Agency: COE
Property Number: 319010075
Status: Unutilized
Comment: 187.30 acres

Parcel 06
DeGray Lake
Section 13
Arkadelphia Co: Clark AR 71923–9361
Landholding Agency: COE
Property Number: 319010076
Status: Unutilized
Comment: 13.0 acres

Parcel 07
DeGray Lake
Section 34
Arkadelphia Co: Hot Spring AR 71923–9361
Landholding Agency: COE
Property Number: 319010077
Status: Unutilized
Comment: 0.27 acres

Parcel 08
DeGray Lake
Section 13
Arkadelphia Co: Hot Spring AR 71923–9361
Landholding Agency: COE
Property Number: 319010078
Status: Unutilized
Comment: 14.6 acres

Parcel 09
DeGray Lake
Section 12
Arkadelphia Co: Hot Spring AR 71923–9361
Landholding Agency: COE
Property Number: 319010079
Status: Unutilized
Comment: 6.60 acres

Parcel 10
DeGray Lake
Section 12
Arkadelphia Co: Hot Spring AR 71923–9361
Landholding Agency: COE
Property Number: 319010080
Status: Unutilized
Comment: 4.5 acres

Parcel 11
DeGray Lake
Section 19
Arkadelphia Co: Hot Spring AR 71923–9361
Landholding Agency: COE
Property Number: 319010081
Status: Unutilized
Comment: 19.50 acres

Lake Greeson
Section 7, 8, and 18
Murfreesboro Co: Pike AR 71958–9720
Landholding Agency: COE
Property Number: 319010083
Status: Unutilized
Comment: 46 acres

California

Lake Mendocino
1160 Lake Mendocino Drive
Ukiah Co: Mendocino CA 95482–9404
Landholding Agency: COE
Property Number: 319011015
Status: Unutilized
Comment: 20 acres, steep, dense brush; potential utilities

NAVAIR Manor
Naval Air Station, Off-site component
Moffett Field
Sunnyvale Co: Santa Clara CA 94035–
Landholding Agency: Navy
Property Number: 779240020
Status: Excess
Base closure Number of Units: 1
Comment: 7.19 acres, improved w/paved streets and sidewalks.

Land
4150 Clement Street
San Francisco Co: San Francisco CA 94121–
Landholding Agency: VA
Property Number: 979240001
Status: Underutilized
Comment: 4 acres; landslide area.

Georgia

Naval Submarine Base

Grid R–2 to R–3 to V–4 to V–1
Kings Bay Co: Camden GA 31547–
Landholding Agency: Navy
Property Number: 779010229
Status: Underutilized
Comment: 111.57 acres; areas may be environmentally protected; secured area with alternate access.

Illinois

Lake Shelbyville
Shelbyville Co: Shelby & Moultr IL 62565–9804
Landholding Agency: COE
Property Number: 319240004
Status: Unutilized
Comment: 5 parcels of land equalling 0.70 acres, improved w/4 small equipment storage bldgs. and a small access road, easement restrictions.

Kansas

Parcel 1
El Dorado Lake
Section 13, 24, and 18
(See County) Co: Butler KS
Landholding Agency: COE
Property Number: 319010064
Status: Unutilized
Comment: 61 acres; most recent use—recreation.

Kentucky

Tract 2625
Barkley Lake, Kentucky, and Tennessee
Cadiz Co: Trigg KY 42211–
Location: Adjoining the village of Rockcastle.
Landholding Agency: COE
Property Number: 319010025
Status: Excess
Comment: 2.57 acres; rolling and wooded.

Tract 2709–10 and 2710–2
Barkley Lake, Kentucky and Tennessee
Cadiz Co: Trigg KY 42211–
Location: 2½ miles in a southerly direction from the village of Rockcastle.
Landholding Agency: COE
Property Number: 319010026
Status: Excess
Comment: 2.00 acres; steep and wooded.

Tract 2708–1 and 2709–1
Barkley Lake, Kentucky and Tennessee
Cadiz Co: Trigg KY 42211–
Location: 2½ miles in a southerly direction from the village of Rockcastle.
Landholding Agency: COE
Property Number: 319010027
Status: Excess
Comment: 3.59 acres; rolling and wooded; no utilities.

Tract 2800
Barkley Lake, Kentucky and Tennessee
Cadiz Co: Trigg KY 42211–
Location: 4½ miles in a southeasterly direction from the village of Rockcastle.
Landholding Agency: COE
Property Number: 319010028
Status: Excess
Comment: 5.44 acres; steep and wooded.

Tract 2915
Barkley Lake, Kentucky and Tennessee
Cadiz Co: Trigg KY 42211–
Location: 6½ miles west of Cadiz.
Landholding Agency: COE
Property Number: 319010029
Status: Excess
Comment: 5.76 acres; steep and wooded; no utilities.

Tract 2702
Barkley Lake, Kentucky and Tennessee
Cadiz Co: Trigg KY 42211–
Location: 1 mile in a southerly direction from the village of Rockcastle.
Landholding Agency: COE
Property Number: 319010031
Status: Excess
Comment: 4.90 acres; wooded; no utilities.

Tract 4318
Barkley Lake, Kentucky and Tennessee
Canton Co: Trigg KY 42212–
Location: Trigg Co. adjoining the city of Canton, KY. on the waters of Hopson Creek.
Landholding Agency: COE
Property Number: 319010032
Status: Excess
Comment: 8.24 acres; steep and wooded.

Tract 4502
Barkley Lake, Kentucky and Tennessee
Canton Co: Trigg KY 42212–
Location: 3½ miles in a southerly direction from Canton, KY.
Landholding Agency: COE
Property Number: 319010033
Status: Excess
Comment: 4.26 acres; steep and wooded.

Tract 4611
Barkley Lake, Kentucky and Tennessee
Canton Co: Trigg KY 42212–
Location: 5 miles south of Canton, KY.
Landholding Agency: COE
Property Number: 319010034
Status: Excess
Comment: 10.51 acres; steep and wooded; no utilities.

Tract 4619
Barkley Lake, Kentucky and Tennessee
Canton Co: Trigg KY 42212–
Location: 4½ miles south from Canton, KY.
Landholding Agency: COE
Property Number: 319010035
Status: Excess
Comment: 2.02 acres; steep and wooded; no utilities.

Tract 4817
Barkley Lake, Kentucky and Tennessee
Canton Co: Trigg KY 42212–
Location: 6½ miles south of Canton, KY.
Landholding Agency: COE
Property Number: 319010036
Status: Excess
Comment: 1.75 acres; wooded.

Tract 1217
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location: On the north side of the Illinois Central Railroad.
Landholding Agency: COE
Property Number: 319010042
Status: Excess
Comment: 5.80 acres; steep and wooded.

Tract 1906
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location: Approximately 4 miles east of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010044
Status: Excess
Comment: 25.86 acres; rolling steep and partially wooded; no utilities.

Tract 1907
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42038–
Location: On the waters of Pilfen Creek, 4 miles east of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010045
Status: Excess
Comment: 8.71 acres; rolling steep and wooded; no utilities.

Tract 2001 #1
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location: Approximately 4½ miles east of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010046
Status: Excess
Comment: 47.42 acres; steep and wooded; no utilities.

Tract 2001 #2
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location: Approximately 4½ miles east of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010047
Status: Excess
Comment: 8.64 acres; steep and wooded; no utilities.

Tract 2005
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location Approximately 5½ miles east of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010048
Status: Excess
Comment: 4.62 acres; steep and wooded; no utilities.

Tract 2307
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location: Approximately 7½ miles southeasterly of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010049
Status: Excess
Comment: 11.43 acres; steep; rolling and wooded; no utilities.

Tract 2403
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location: 7 miles southeasterly of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010050
Status: Excess
Comment: 1.56 acres; steep and wooded; no utilities.

Tract 2504
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location: 9 miles southeasterly of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010051
Status: Excess
Comment: 24.46 acres; steep and wooded; no utilities.

Tract 214
Barkley Lake, Kentucky and Tennessee
Grand Rivers Co: Lyon KY 42045–

Location: South of the Illinois Central Railroad, 1 mine east of the Cumberland River.
Landholding Agency: COE
Property Number: 309010052
Status: Excess
Comment: 5.5 acres; wooded; no utilities.

Tract 215
Barkley Lake, Kentucky and Tennessee
Grand Rivers Co: Lyon KY 42045–
Location: 5 miles southwest of Kuttawa
Landholding Agency: COE
Property Number: 319010053
Status: Excess
Comment: 1.40 acres; wooded; no utilities.

Tract 241
Barkley Lake, Kentucky and Tennessee
Grand Rivers Co: Lyon KY 42045–
Location: Old Henson Ferry Road, 6 miles west of Kuttawa, KY.
Landholding Agency: COE
Property Number: 319010054
Status: Excess
Comment: 1.26 acres; steep and wooded; no utilities.

Tracts 306, 311, 315 and 325
Barkley Lake, Kentucky and Tennessee
Grand Rivers Co: Lyon KY 42045–
Location: 2.5 miles southwest of Kuttawa, KY. on the waters of Cypress Creek.
Landholding Agency: COE
Property Number: 319010055
Status: Excess
Comment: 38.77 acres; steep and wooded; no utilities.

Tracts 2305, 2306, and 2400–1
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42030–
Location: 6½ miles southeasterly of Eddyville, KY.
Landholding Agency: COE
Property Number: 319010056
Status: Excess
Comment: 97.66 acres; steep rolling and wooded; no utilities.

Tract 500–2
Barkley Lake, Kentucky and Tennessee
Kuttawa Co: Lyon KY 42055–
Location: Situated on the waters of Poplar Creek, approximately 1 mile southwest of Kuttawa, KY.
Landholding Agency: COE
Property Number: 319010057
Status: Excess
Comment: 3.58 acres; hillside ridgeland and wooded; no utilities

Tracts 5203 and 5204
Barkley Lake, Kentucky and Tennessee
Linton Co: Trigg KY 42212–
Location: Village of Linton, KY state highway 1254.
Landholding Agency: COE
Property Number: 319010058
Status: Excess
Comment: 0.93 acres; rolling, partially wooded; no utilities.

Tract 5240
Barkley Lake, Kentucky and Tennessee
Linton Co: Trigg KY 42212–
Location: 1 mile northwest of Linton, KY.
Landholding Agency: COE
Property Number: 319010059
Status: Excess
Comment: 2.26 acres; steep and wooded; no utilities.

Tract 4631
Barkley Lake, Kentucky and Tennessee
Canton Co: Trigg KY 42212–
Location: 4½ miles south from Canton, KY.
Landholding Agency: COE
Property Number: 319011621
Status: Excess
Comment: 3.71 acres; steep and wooded; subject to utility easements.

Tract 4619–B
Barkley Lake, Kentucky and Tennessee
Cantno Co: Trigg KY 42212–
Location: 4½ miles south from Canton, KY.
Landholding Agency: COE
Property Number: 319011622
Status: Excess
Comment: 1.73 acres; steep and wooded; subject to utility easements.

Tract 2403–B
Barkley Lake, Kentucky and Tennessee
Eddyville Co: Lyon KY 42038–
Location: 7 miles southeasterly from Eddyville, KY.
Landholding Agency: COE
Property Number: 319011623
Status: Unutilized
Comment: 0.70 acres, wooded; subject to utility easements.

Tract 241–B
Barkley Lake, Kentucky and Tennessee
Grand Rivers Co: Lyon KY 42045–
Location: South of Old Henson Ferry Road, 6 miles west of Kuttawa, KY.
Landholding Agency: COE
Property Number: 319011624
Status: Excess
Comment: 11.16 acres; steep and wooded; subject to utility easements.

Tracts 212 and 237
Barkley Lake, Kentucky and Tennessee
Grand Rivers Co: Lyon KY 42045–
Location: Old Henson Ferry road, 6 miles west of Kuttawa, KY.
Landholding Agency: COE
Property Number: 319011625
Status: Excess
Comment: 2.44 acres; steep and wooded; subject to utility easements.

Tract 215–B
Barkley Lake, Kentucky and Tennessee
Grand Rivers Co: Lyon KY 42045–
Location: 5 miles southwest of Kuttawa
Landholding Agency: COE
Property Number: 319011626
Status: Excess
Comment: 1.00 acres; wooded; subject to utility easements

Tract 233
Barkley Lake, Kentucky and Tennessee
Grand Rivers Co: Lyon KY 42045–
Location: 5 miles southwest of Kuttawa
Landholding Agency: COE
Property Number: 319011627
Status: Excess
Comment: 1.00 acres; wooded; subject to utility easements.

Tract N–819
Dale Hollow Lake & Dam Project
Illwill Creek, Hwy 90
Hobart Co: Clinton KY 42601–
Landholding Agency: COE
Property Number: 319140009
Status: Underutilized
Comment: 91 acres, most recent use—hunting, subject to existing easements.

Louisiana

Wallace Lake Dam and Reservoir
Shreveport Co: Caddo LA 71103–
Landholding Agency: COE
Property Number: 319011009
Status: Unutilized
Comment: 11 acres; wildlife/forestry; no utilities.

Bayou Bodcau Dam and Reservoir
Haughton Co: Caddo LA 71037–9707
Location: 35 miles Northeast of Shreveport, LA.
Landholding Agency: COE
Property Number: 319011010
Status: Unutilized
Comment: 203 acres; wildlife/forestry; no utilities.

Land—8.27 acres
VA Medical Center
2501 Shreveport Highway
Alexandria Co: Rapides LA 71301–
Landholding Agency: VA
Property Number: 979010009
Status: Unutilized
Comment: 8.27 acres, heavily wood with natural drainage ravine across property, most recent use—recreation/buffer area.

Maine

Naval Air Station
Transmitter Site
Old Bath Road
Brunswick Co: Cumberland ME 04053–
Landholding Agency: Navy
Property Number: 779010111
Status: Underutilized
Comment: 66.13 acres, most recent use—transmitter station.

Maryland

VA Medical Center
9500 North Point Road
Fort Howard Co: Baltimore MD 21052-
Landholding Agency: VA
Property Number: 979010020
Status: Underutilized
Comment: Approx. 10 acres, wetland and periodically floods, most recent use—dump site for leaves.

Minnesota

Parcel D
Pine River
Cross Lake Co: Crow Wing MN 56442-
Location: 3 miles from city of Cross Lake, between highways 6 and 371.
Landholding Agency: COE
Property Number: 319011038
Status: Excess
Comment: 17 acres; no utilities.

Tract 92
Sandy Lake
McGregor Co: Aitkins MN 55760-
Location: 4 miles west of highway 65, 15 miles from city of McGregor.
Landholding Agency: COE
Property Number: 319011040
Status: Excess
Comment: 4 acres; no utilities.

Tract 98
Leech Lake
Benedict Co: Hubbard MN 56641-
Location: 1 mile from city of Federal Dam, Hwy.
Landholding Agency: COE
Property Number: 319011041

Status: Excess
Comment: 7.3 acres; no utilities.

Mississippi

Parcel 7
Grenada Lake
Sections 22, 23, T24N
Grenada Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011019
Status: Underutilized
Comment: 100 acres; no utilities; intermittently used under lease—expires 1994.

Parcel 8
Grenada Lake
Section 20, T24N
Grenada Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011020
Status: Underutilized
Comment: 30 acres; no utilities; intermittently used under lease—expires 1994.

Parcel 9
Grenada Lake
Sections 20, T24N, R7E
Grenada Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011021
Status: Underutilized
Comment: 23 acres; no utilities; intermittently used under lease—expires 1994.

Parcel 10
Grenada Lake
Sections 16, 17, 18 T24N R8E
Grenada Co: Calhoun MS 38901–0903
Landholding Agency: COE
Property Number: 319011022
Status: Underutilized
Comment: 490 acres; no utilities; intermittently used under lease—expires 1994.

Parcel 2
Grenada Lake
Section 20 and T23N, R5E
Grenada Co: Grenada MS 38901–0903
Landholding Agency: COE
Property Number: 319011023
Status: Underutilized
Comment: 60 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 3
Grenada Lake
Section 4, and T23N, R5E
Grenada Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011024
Status: Underutilized
Comment: 120 acres; no utilities; most recent use—wildlife and forestry management; (13.5 acres/agriculture lease).

Parcel 4
Grenada Lake
Section 2 and 3. T23N, R5E
Grenada Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011025
Status: Underutilized
Comment: 60 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 5
Grenada Lake
Section 7, and T24N, R6E
Grenada Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011026
Status: Underutilized
Comment: 20 acres; no utilities; most recent use—wildlife and forestry management; (14 acres/agriculture lease).

Parcel 6
Grenada Lake
Section 9, and T24N, R6E
Grenada Co: Yalobusha MS 38903–0903
Landholding Agency: COE
Property Number: 319011027
Status: Underutilized
Comment: 80 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 11
Grenada Lake
Section 20 and T24N, R8E
Grenada Co: Calhoun MS 38901–0903
Landholding Agency: COE
Property Number: 319011028
Status: Underutilized
Comment: 30 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 12
Grenada Lake
Section 25, T24N, R7E
Grenada Co: Yalobusha MS 38390–10903
Landholding Agency: COE
Property Number: 319011029
Status: Underutilized
Comment: 30 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 13
Grenada Lake
Section 34 and T24N, R7E
Grenada Co: Yalobusha MS 38903–0903
Landholding Agency: COE
Property Number: 319011030
Status: Underutilized
Comment: 35 acres; no utilities; most recent use—wildlife and forestry management; (11 acres/agriculture lease).

Parcel 14
Grenada Lake
Section 3, T23N, R6E
Grenada, Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011031
Status: Underutilized
Comment: 15 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 15
Grenada Lake
Section 4, T24N, R6E
Grenada, Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011032
Status: Underutilized
Comment: 40 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 16
Grenada Lake
Section 9, T23N, R6E
Grenada, Co: Yalobusha MS 38901–0903
Landholding Agency: COE
Property Number: 319011033
Status: Underutilized
Comment: 70 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 17
Grenada Lake
Section 17, T23N, R7E
Grenada, Co: Grenada MS 38901–0903
Landholding Agency: COE
Property Number: 319011034
Status: Underutilized
Comment: 35 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 18
Grenada Lake
Section 22, T23N, R7E
Grenada, Co: Grenada MS 28902–0903
Landholding Agency: COE
Property Number: 319011035
Status: Underutilized
Comment: 10 acres; no utilities; most recent use—wildlife and forestry management.

Parcel 19
Grenada Lake
Section 9, T22N, R7E
Grenada, Co: Grenada MS 38901–0903
Landholding Agency: COE
Property Number: 319011036
Status: Underutilized
Comment: 20 acres; no utilities; most recent use—wildlife and forestry management.

Missouri

Harry S Truman Dam & Reservoir
Warsaw Co: Benton MO 65355–
Location: Triangular shaped parcel southwest of access road "B", part of Bledsoe Ferry Park Tract 150.
Landholding Agency: COE
Property Number: 319030014
Status: Underutilized
Comment: 1.7 acres; potential utilities.

Ohio

Hannibal Locks and Dam
Ohio River
P.O. Box 8
Hannibal Co: Monroe OH 43931–0008
Location: Adjacent to the new Martinsville Bridge.
Landholding Agency: COE
Property Number: 319010015
Status: Underutilized
Comment: 22 acres; river bank

Oklahoma

Pine Creek Lake
Section 27
(See County) Co: McCurtain OK
Landholding Agency: COE
Property Number: 319010923
Status: Unutilized
Comment: 3 acres; no utilities; subject to right of way for Oklahoma State Highway 3.

Pennsylvania

Mahoning Creek Lake
New Bethlehem Co: Armstrong PA 16242–9603
Location: Route 28 north to Belknap, Road #4
Landholding Agency: COE
Property Number: 319010018
Status: Excess
Comment: 2.58 acres; steep and densely wooded.

Tracts 610, 611, 612
Shenango River Lake
Sharpsville Co: Mercer PA 16150–
Location: I–79 North, I–80 West, Exit Sharon. R18 North 4 miles, left on R518, right on Mercer Avenue.
Landholding Agency: COE
Property Number: 319011001

Status: Excess
Comment: 24.09 acres; subject to flowage easement

Tracts L24, L26
Crooked Creek Lake
(See County) Co: Armstrong PA 03051–
Location: Left bank—65 miles downstream of dam.
Landholding Agency: COE
Property Number: 319011011
Status: Unutilized
Comment: 7.89 acres; potential for utilities.

Tennessee

Tract 6827
Barkley Lake
Dover Co: Stewart TN 37058–
Location: 2½ miles west of Dover, TN.
Landholding Agency: COE
Property Number 319010927
Status: Excess
Comment: .57 acres; subject to existing easements.

Tracts 6002–2 and 6010
Barkley Lake
Dover Co: Stewart TN 37058–
Location: 3½ miles south of village of Tabaccoport.
Landholding Agency: COE
Property Number: 319010928
Status: Excess
Comment: 100.86 acres; subject to existing easements.

Tract 11516
Barkley Lake
Ashland City Co: Dickson TN 37015–
Location: ½ mile downstream from Cheatham Dam
Landholding Agency: COE
Property Number: 319010929
Status: Excess
Comment: 26.25 acres; subject to existing easements.

Tract 2319
J. Percy Priest Dam and Reservoir
Murfreesboro Co: Rutherford TN 37130–
Location: West of Buckeye Bottom Road
Landholding Agency: COE
Property Number: 319010930
Status: Excess
Comment: 14.48 acres; subject to existing easements.

Tract 2227
J. Percy Priest Dam and Reservoir
Murfreesboro Co: Rutherford TN 37130–
Location: Old Jefferson Pike
Landholding Agency: COE
Property Number: 319010931
Status: Excess
Comment: 2.27 acres; subject to existing easements.

Tract 2107
J. Percy Priest Dam and Reservoir
Murfreesboro Co: Rutherford TN 37130–
Location: Across Fall Creek near Fall Creek camping area.
Landholding Agency: COE
Property Number: 319010932
Status: Excess
Comment: 14.85 acres; subject to existing easements.

Tracts 2601, 2602, 2603, 2604
Cordell Hull Lake and Dam Project
Doe Row Creek
Gainesboro Co: Jackson TN 38562–
Location: TN Highway 56
Landholding Agency: COE
Property Number: 319010933
Status: Unutilized
Comment: 11 acres; subject to existing easements.

Tract 1911
J. Percy Priest Dam and Reservoir
Murfreesboro Co: Rutherford TN 37130–
Location: East of Lamar Road
Landholding Agency: COE
Property Number: 319010934
Status: Excess
Comment: 15.31 acres; subject to existing easements.

Tract 2371
J. Percy Priest Dam and Reservoir
Murfreesboro Co: Rutherford TN 37130–
Location: South of Old Jefferson Pike
Landholding Agency: COE
Property Number: 319010935
Status: Excess
Comment: 12 acres; subject to existing easements.

Tract 7206
Barkley Lake
Dover Co: Stewart TN 37058–
Location: 2½ miles SE of Dover, TN.
Landholding Agency: COE
Property Number: 319010936
Status: Excess
Comment: 10.15 acres; subject to existing easements.

Tracts 8813, 8814
Barkley Lake
Cumberland Co: Stewart TN 37050–
Location: 1½ miles East of Cumberland City.
Landholding Agency: COE
Property Number: 319010937
Status: Excess
Comment: 96 acres; subject to existing easements.

Tract 8911
Barkley Lake
Cumberland City Co: Montgomery TN 37050–
Location: 4 miles East of Cumberland City.
Landholding Agency: COE
Property Number: 319010938
Status: Excess
Comment: 7.7 acres; subject to existing easements.

Tract 11503
Barkley Lake
Ashland City Co: Cheatham TN 37015–
Location: 2 miles downstream from Cheatham Dam.
Landholding Agency: COE
Property Number: 319010939
Status: Excess
Comment: 1.1 acres; subject to existing easements.

Tracts 11523, 11524
Barkley Lake
Ashland City Co: Cheatham TN 37015–
Location: 2½ miles downstream from Cheatham Dam.
Landholding Agency: COE
Property Number: 319010940
Status: Excess
Comment: 19.5 acres; subject to existing easements.

Tract 6410
Barkley Lake
Bumpus Mills Co: Stewart TN 37028–
Location: 4½ miles SW of Bumpus Mills.
Landholding Agency: COE
Property Number: 319010941
Status: Excess
Comment: 17 acres; subject to existing easements.

Tract 9707
Barkley Lake
Palmyer Co: Montgomery TN 37142–
Location: 3 miles NE of Palmyer, TN. Highway 149
Landholding Agency: COE
Property Number: 319010943
Status: Excess
Comment: 6.6 acres; subject to existing easements.

Tract 6949
Barkley Lake
Dover Co: Stewart TN 37058–
Location: 1½ miles SE of Dover, TN.
Landholding Agency: COE
Property Number: 319010944
Status: Excess
Comment: 29.67 acres; subject to existing easements.

Tracts 6005 and 6017
Barkley Lake
Dover Co: Stewart TN 37058–
Location: 3 miles south of Village of Tobaccoport.
Landholding Agency: COE
Property Number: 319011173
Status: Excess
Comment: 5 acres; subject to existing easements.

Tracts K–1191, K–1135
Old Hickory Lock and Dam
Hartsville Co: Trousdale TN 37074–
Landholding Agency: COE
Property Number: 319130007
Status: Underutilized
Comment: 92 acres (38 acres in floodway), most recent use—recreation.

Tract A–102
Dale Hollow Lake & Dam Project
Canoe Ridge, State Hwy 52
Celina Co: Clay TN 38551–
Landholding Agency: COE
Property Number: 319140006
Status: Underutilized
Comment: 351 acres, most recent use—hunting, subject to existing easements.

Tract A–120
Dale Hollow Lake & Dam Project
Swann Ridge, State Hwy No. 53
Celina Co: Clay TN 38551–
Landholding Agency: COE
Property Number: 319140007
Status: Underutilized
Comment: 883 acres, most recent use—hunting, subject to existing easements.

Tracts A–20, A–21
Dale Hollow Lake & Dam Project
Red Oak Ridge, State Hwy No. 53
Celina Co: Clay TN 38551–
Landholding Agency: COE
Property Number: 319140008
Status: Underutilized
Comment: 821 acres, most recent use—recreation, subject to existing easements.

Tract D–185
Dale Hollow Lake & Dam Project
Ashburn Creek, Hwy No. 53

Livingston Co: Clay TN 38570–
Landholding Agency: COE
Property Number: 319140010
Status: Underutilized
Comment: 883 acres, most recent use—hunting, subject to existing easements.

Texas

Parcel #222
Lake Texoma
(See County) Co: Grayson TX
Location: C. Meyerheim survey A–829, J. Hamilton survey A–529
Landholding Agency: COE
Property Number: 319010421
Status: Excess
Comment: 52.80 acres; most recent use—recreation.

Peary Point #2
Naval Air Station
Corpus Christi Co: Nueces TX 78419–5000
Landholding Agency: Navy
Property Number: 779030001
Status: Excess
Comment: 43.48 acres; 60% of land under lease until 8/93.
GSA Number: 7–N–TX–402–V.

Land
Olin E. Teague Veterans Center
1901 South 1st Street
Temple Co: Bell TX 76504–
Landholding Agency: VA
Property Number: 979010079
Status: Underutilized
Comment: 13 acres, portion formerly landfill, portion near flammable materials, railroad crosses property, potential utilities.

VA. Medical Center
4800 Memorial Drive
Waco Co: McLennan TX 76711–
Landholding Agency: VA
Property Number: 979010081
Status: Underutilized
Comment: 2.3 acres, leased to Owens-Illinois Glass Plant, expiration date 10/31/92, most recent use—parking lot.

Wisconsin

VA. Medical Center
County Highway E
Tomah Co: Monroe WI 54660–
Landholding Agency: VA
Property Number: 979010054
Status: Underutilized
Comment: 12.4 acres, serves as buffer between center and private property, no utilities.

Suitable/Unavailable Properties

Buildings (by State)

California

Santa Fe Flood Control Basin
Irwindale Co: Los Angeles CA 91706–
Landholding Agency: COE
Property Number: 319011298
Status: Unutilized
Comment: 1400 sq. ft.; 1 story stucco; needs rehab; termite damage; secured area with alternate access.

Bldg. 116
VA Medical Center
Wilshire and Sawtelle Blvds.
Los Angeles Co: Los Angeles CA 90073–
Landholding Agency: VA
Property Number: 979110009
Status: Underutilized
Comment: 60309 sq. ft., 3 story brick frame, seismic reinforcement defics., underutil. port of bldg. used intermitly., needs rehab, poss. asbestos in pipes/floor tiles, site access lim.

Bldg. 263
VA Medical Center
Wilshire and Sawtelle Blvds.
Los Angeles Co: Los Angeles CA 90073–
Landholding Agency: VA
Property Number: 979110010
Status: Unutilized
Comment: 1600 sq. ft., 1 story wood frame w/ stucco exterior, needs rehab, poss. asbestos on pipes/floor tiles, site access limitations, no operating utilities.

Florida

Bldg. CN7
Ortona Lock Reservation, Okeechobee Waterway
Ortona Co: Glades FL 33471–
Location: Located off Highway 78 approximately 7 miles west of intersection with Highway 27.
Landholding Agency: COE
Property Number: 319010012
Status: Unutilized
Comment: 1468 sq. ft.; one floor wood frame; most recent use—residence; secured with alternate access.

Bldg. CN8
Ortona Lock Reservation, Okeechobee Waterway
Ortona Co: Glades FL 33471–
Location: Located off Highway 78 approximately 7 miles west of intersection with Highway 27.
Landholding Agency: COE
Property Number: 31900013
Status: Unutilized
Comment: 1468 sq. ft.; one floor wood frame; most recent use—residence; secured with alternate access.

Bldg. 24, VAMC
10,000 Bay Pines Blvd.
Bay Pines Co: Pinellas FL 33504–
Landholding Agency: VA
Property Number: 979230008
Status: Underutilized
Comment: portion of 6150 sq. ft., 3 story concrete frame bldg., needs rehab, presence of asbestos, listed on Natl Register of Historic Places, access restrictions.

Bldg. 36, VAMC
10,000 Bay Pines Blvd.
Bay Pines Co: Pinellas Fl 33504–
Landholding Agency: VA
Property Number: 979230009
Status: Underutilized
Comment: portion of 15,984 sq. ft., 1 story concrete frame bldg., needs rehab, presence of asbestos, listed on Natl Register of Historic Places, access restrictions.

Bldg. 37, VAMC
10,000 Bay Pines Blvd.
Bay Pines Co: Pinellas FL 33504–
Landholding Agency: VA
Property Number: 979230010
Status: Underutilized
Comment: Third floor of a concrete frame bldg. (13,900 sq. ft.), presence of asbestos, listed on Natl Register of Historic Places, access restrictions.

Georgia

Lot 3
Lake Forrest Subdivision
Woodframe House
Hartwell Co: Hartwell GA
Landholding Agency: COE
Property Number: 319110026
Status: Excess
Comment: 896 sq. ft.; 2 story wood frame residence; off-site removal only.

Guam

Bldg. 99, Loran Station—C
Barrigada GU 96913–
Landholding Agency: DOT
Property Number: 879220002
Status: Excess
Comment: 3960 sq. ft. concrete block transmitting station with tower

Idaho

Bldg.
Albeni Falls Dam
U.S. Highway 2, Priest River
Bonner Co: Bonner ID 83856–
Location: 3½ miles west of Priest River.
Landholding Agency: COE
Property Number: 319110028
Status: Unutilized
Comment: 2989 sq. ft.; 3 story log construction with wood frame; off-site removal only; needs rehab.

Bldg. 705, Ditchrider House
Boise Project
Notus Co: Cayon ID 83656–
Location: T5N, R3W, Sec 2, SE¼, SW¼, SW¼
Landholding Agency: Interior
Property Number: 619120010
Status: Unutilized
Comment: 586 sq. ft., 1 story residence, needs major rehab, off-site use only.

Illinois

Bldg. 7
Ohio River Locks & Dam No. 53
Grand Chain Co: Pulaski IL 62941–9801
Location: Ohio River Locks and Dam No. 53 at Grand Chain
Landholding Agency: COE
Property Number: 319010001
Status: Unutilized
Comment: 900 sq. ft.; 1 floor wood frame; most recent use—residence.

Bldg. 6
Ohio River Locks & Dam No. 53
Grand Chain Co: Pulaski IL 62941–9801
Location: Ohio River Locks and Dam No. 53 at Grand Chain
Landholding Agency: COE
Property Number: 319010002
Status: Unutilized
Comment: 900 sq. ft.; one floor wood frame; most recent use—residence.

Bldg. 5
Ohio River Locks & Dam No. 53
Grand Chain Co: Pulaski IL 62941–9801
Location: Ohio River Locks and Dam No. 53 at Grand Chain
Landholding Agency: COE
Property Number: 319010003
Status: Unutilized
Comment: 900 sq. ft.; one floor wood frame; most recent use—residence.

Bldg. 4
Ohio River Locks & Dam No. 53

Grand Chain Co: Pulaski IL 62941–9801
Location: Ohio River Locks and Dam No. 53 at Grand Chain
Landholding Agency: COE
Property Number: 319010004
Status: Unutilized
Comment: 900 sq. ft.; one floor wood frame; most recent use—residence.

Bldg. 3
Ohio River Locks & Dam No. 53
Grand Chain Co: Pulaski IL 62941–9801
Location: Ohio River Locks and Dam No. 53 at Grand Chain
Landholding Agency: COE
Property Number: 319010005
Status: Unutilized
Comment: 900 sq. ft.; one floor wood frame.

Bldg. 2
Ohio River Locks & Dam No. 53
Grand Chain Co: Pulaski IL 62941–9801
Location: Ohio River Locks and Dam No. 53 at Grand Chain
Landholding Agency: COE
Property Number: 319010006
Status: Unutilized
Comment: 900 sq. ft.; one floor wood frame; most recent use—residence.

Bldg. 1
Ohio River Locks & Dam No. 53
Grand Chain Co: Pulaski IL 62941–9801
Location: Ohio River Locks and Dam No. 53 at Grand Chain
Landholding Agency: COE
Property Number: 319010007
Status: Unutilized
Comment: 900 sq. ft.; one floor wood frame; most recent use—residence.

Indiana

Cagles Mill Lake
Cagles Mill Lake Dam
Poland Co: Putnam IN 47868–
Location: Midway between Indianapolis and Terre Haute, 5 miles west of Poland on SR42.
Landholding Agency: COE
Property Number: 319011046
Status: Unutilized
Comment: 1066 sq. ft.; wood frame residence; minor rehab.

Dwelling #2
Cagles Mill Lake
Poland Co: Putnam IN 47868–
Location: 5 miles west of Polano on SR 42
Landholding Agency: COE
Property Number: 319011686
Status: Unutilized
Comment: 872 sq. ft.; 1 story wood frame residence; fair condition.

Bldg. 24, VAMC
East 38th Street
Marion Co: Grant IN 46952–
Landholding Agency: VA
Property Number: 979230005
Status: Underutilized
Comment: portion of 4135 sq. ft. 2-story wood structure, needs major rehab, no sanitary or heating facilities, presence of asbestos, access restrictions.

Bldg. 105, VAMC
East 38th Street
Marion Co: Grant IN 46952–
Landholding Agency: VA
Property Number: 979230006
Status: Underutilized
Comment: 310 sq. ft., 1 story stone structure, needs major rehab, no sanitary or heating facilities, access restrictions.

Kentucky

Kentucky River Lock and Dam 3
Pleasureville Co: Henry KY 40057–
Location: SR 421 North from Frankfort, KY. to highway 561, right on 561 approximately 3 miles to site.
Landholding Agency: COE
Property Number: 319010060
Status: Unutilized
Comment: 897 sq. ft.; 2 story wood frame; structural deficiencies.

Kentucky River Lock and Dam 3
Pleasureville Co: Henry KY 40057–
Location: SR 421 north from Frankfort, KY. to highway 561, right on 561 approximately 3 miles to site.
Landholding Agency: COE
Property Number: 319010061
Status: Unutilized
Comment: 1060 sq. ft.; 2 story wood frame; needs rehab.

Bldg. 1
Kentucky River Lock and Dam
Carrolton Co: Carroll KY 41008–
Location: Take I–71 to Carrolton, KY exit, go east on SR #227 to Highway 320, then left for about 1.5 miles to site.
Landholding Agency: COE
Property Number: 319011628
Status: Unutilized
Comment: 1530 sq. ft.; 2 story wood frame house; subject to periodic flooding; needs rehab.

Bldg. 2
Kentucky River Lock and Dam
Carrolton Co: Carroll KY 41008–
Location: Take I–71 to Carrolton, KY exit, go east on SR #227 to Highway 320, then left for about 1.5 miles to site.
Landholding Agency: COE
Property Number: 319011629
Status: Unutilized
Comment: 1530 sq. ft.; 2 story wood frame house; subject to periodic flooding; needs rehab.

Maine

Mount Desert Rock Light
U.S. Coast Guard
Southwest Harbor Co: Hancock ME 04679–
Landholding Agency: DOT
Property Number: 879240023
Status: Unutilized
Comment: 1600 sq. ft., 2-story wood frame dwelling, needs rehab, limited utilities, limited access, property is subject to severe storms.

Mount Desert Rock Light
U.S. Coast Guard
Southwest Harbor Co: Hancock ME 04679–
Landholding Agency: DOT
Property Number: 879240023
Status: Unutilized
Comment: 1600 sq. ft., 2-story wood frame dwelling, needs rehab, limited utilities, limited access, property is subject to severe storms.

Little River Light
U.S. Coast Guard
Cutler Co: Washington ME
Landholding Agency: DOT
Property Number: 879240026
Status: Unutilized
Comment: 1100 sq. ft., 2-story wood frame dwelling, well is contaminated, limited utilities.

Burnt Island Light
U.S. Coast Guard
Southport Co: Lincoln ME 04576–
Landholding Agency: DOT
Property Number: 879240027
Status: Unutilized
Comment: 750 sq. ft., 2-story wood frame dwelling.

Massachusetts

Keepers Dwelling
Cape Ann Light, Thachers Island
U.S. Coast Guard
Rockport Co: Essex MA 01966–
Landholding Agency: DOT
Property Number: 879240024
Status: Unutilized
Comment: 1000 sq. ft., 2-story brick dwelling, large wave action with severe ocean storms.

Assistant Keepers Dwelling
Cape Ann Light, Thachers Island
U.S. Coast Guard
Rockport Co: Essex MA 01966–
Landholding Agency: DOT
Property Number: 879240025
Status: Unutilized
Comment: 1100 sq. ft., 2-story wood frame dwelling, large wave action with severe ocean storms.

Minnesota

Bldg. 43
VA Medical Center
Minneapolis Co: Hennepin MN 55441–7
Location: 54th Street and 48th Avenue S.
Landholding Agency: VA
Property Number: 979010032
Status: Underutilized
Comment: 26000 sq. ft., 8 story brick/steel frame, asbestos present on pipe insulation, most recent use—office/storage.

Bldg. 227
VA Medical Center
Fort Snelling
St. Paul Co: Hennepin MN 55111–
Landholding Agency: VA
Property Number: 979010033
Status: Unutilized
Comment: 850 sq. ft., 2 story wood frame and brick residence, utilities disconnected.

New Mexico

Bldg. 814, Kirtland AFB
Adjacent to Sandia Natl. Labs
Albuquerque Co: Bernalillo NM 97185–
Landholding Agency: Energy
Property Number: 419220002
Status: Unutilized
Comment: 6900 sq. ft., one story wood frame, needs rehab, presence of asbestos, off-site use only, most recent use—office, secured area w/alternate access.

New York

Bldg. 5
VA Medical Center
Redfield Parkway
Batavia Co: Genesee NY 14020–
Landholding Agency: VA
Property Number: 979030001
Status: Underutilized

Comment: Portion of 16800 sq. ft., 3 story, brick and masonry bldgs., needs minor repairs.

Bldg. 144, VAECC
Linden Blvd. and 179th St.
St. Albans Co: Queens NY 11425–
Landholding Agency: VA
Property Number: 979210004
Status: Unutilized
Comment: 5215 sq. ft., 2 story wood frame residence, needs rehab, potential utilities.

Bldg. 143, VAECC
Linden Blvd. and 179th St.
St. Albans Co: Queens NY 11425–
Landholding Agency: VA
Property Number: 979210005
Status: Unutilized
Comment: 5215 sq. ft., 2 story wood frame residence, needs rehab, potential utilities.

Bldgs. 142/146, VAECC
Linden Blvd. and 179th St.
St. Albans Co: Queens NY 11425–
Landholding Agency: VA
Property Number: 979210006
Status: Unutilized
Comment: 5215 sq. ft., 2 story wood frame residence with 380 sq. ft. attached garage, needs rehab, potential utilities.

Pennsylvania

Conemaugh River Lake
Road #1, Box 702
Saltsburg Co: Indiana PA 15681–
Landholding Agency: COE
Property Number: 319010019
Status: Unutilized
Comment: 2642 sq. ft.; one unit of brick/frame duplex; most recent use—residence.

Bldg. 3—VA Medical Center
University Drive C
Pittsburgh Co: Allegheny PA 14240–
Landholding Agency: VA
Property Number: 979210002
Status: Unutilized
Comment: Approx. 2765 sq. ft., two story brick residence, needs rehab.

Bldg. 2, VAMC
1700 South Lincoln Avenue
Lebanon Co: Lebanon PA 17042–
Landholding Agency: VA
Property Number: 979230011
Status: Unutilized
Comment: portion of 16,360 sq. ft. 3-story structure, most recent use—storage.

Bldg. 3, VAMC
1700 South Lincoln Avenue
Lebanon Co: Lebanon PA 17042–
Landholding Agency: VA
Property Number: 979230012
Status: Unutilized
Comment: portion of bldg. (3850 and 4360 sq. ft.), most recent use—storage.

Bldg. 27, VAMC
1700 South Lincoln Avenue
Lebanon Co: Lebanon PA 17042–
Landholding Agency: VA
Property Number: 979230013
Status: Unutilized
Comment: Second floor of bldg. (3,410 sq. ft.)

Bldg. 103, VAMC
1700 South Lincoln Avenue
Lebanon Co: Lebanon PA 17042–
Landholding Agency: VA
Property Number: 979230014
Status: Unutilized
Comment: portion of 1215 sq. ft. 2-story farm house, needs repair.

Tennessee

Transiet Quarters
Dale Hollow Lake and Dam Project
Dale Hollow Resource Mgr Office, Rt 1, Box 54
Celina Co: Clay TN 38551–
Landholding Agency: COE
Property Number: 319140005
Status: Unutilized
Comment: 1400 sq. ft., concrete block, possible security restrictions, subject to existing easements.

Texas

Bldg. 2435
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010161
Status: Underutilized
Comment: 1730 sq. ft.; 1 story residence.

Bldg. 2436
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010162
Status: Underutilized
Comment: 3352 sq. ft.; 1 story residence.

Bldg. 2460
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010163
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2462
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010164
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2464
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010165
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2466
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010166
Status: Underutilized
Comment: 1576 sq. ft.; 1 story residence.

Bldg. 2467
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010167
Status: Underutilized
Comment: 3532 sq. ft.; 1 story residence.

Bldg. 2468
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010168
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2472
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010169
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2476
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010170
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2482
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010171
Status: Underutilized
Comment: 1760 sq. ft.; 1 story residence.

Bldg. 2495
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010172
Status: Underutilized
Comment: 1760 sq. ft.; 1 story residence.

Bldg. 2514
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010173
Status: Underutilized
Comment: 1730 sq. ft.; 1 story residence.

Bldg. 2518
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010174
Status: Underutilized
Comment: 1676 sq. ft.; 1 story residence.

Bldg. 2520
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010175
Status: Underutilized
Comment: 1676 sq. ft.; 1 story residence.

Bldg. 2522
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010176
Status: Underutilized
Comment: 1676 sq. ft.; 1 story residence.

Bldg. 2526
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–

Landholding Agency: Navy
Property Number: 779010177
Status: Underutilized
Comment: 1676 sq. ft.; 1 story residence.

Bldg. 2423
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010178
Status: Underutilized
Comment: 3532 sq. ft.; 1 story residence.

Bldg. 2427
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010179
Status: Underutilized
Comment: 3532 sq. ft.; 1 story residence.

Bldg. 2431
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010180
Status: Underutilized
Comment: 3532 sq. ft.; 1 story residence.

Bldg. 2424
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010181
Status: Underutilized
Comment: 3352 sq. ft.; 1 story residence.

Bldg. 2433
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010182
Status: Underutilized
Comment: 3352 sq. ft.; 1 story residence.

Bldg. 2428
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010183
Status: Underutilized
Comment: 3352 sq. ft.; 1 story residence.

Bldg. 2429
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010184
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2454
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010185
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2477
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010186
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2485
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010187
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2499
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010188
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2503
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010189
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2507
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010190
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2513
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010191
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2521
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010192
Status: Underutilized
Comment: 3152 sq. ft.; 1 story residence.

Bldg. 2451
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010193
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2458
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010194
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2461
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010195
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2473
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010196
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2478
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010197
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2480
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010198
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2484
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010199
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2486
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010200
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2487
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010201
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2488
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010202
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2494
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010203
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2500
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010204
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2502
Laguna Housing Area

NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010205
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2506
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010206
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence

Bldg. 2508
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010207
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2525
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010208
Status: Underutilized
Comment: 1758 sq. ft.; 1 story residence.

Bldg. 2452
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010209
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2475
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010210
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2479
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010211
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2497
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010212
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2501
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010213
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2505
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010214
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2515
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010215
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2517
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010216
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2519
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010217
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2523
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010218
Status: Underutilized
Comment: 3356 sq. ft.; 1 story residence.

Bldg. 2465
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010219
Status: Underutilized
Comment: 1576 sq. ft.; 1 story residence.

Bldg. 2493
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010220
Status: Underutilized
Comment: 1576 sq. ft.; 1 story residence.

Bldg. 2510
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010221
Status: Underutilized
Comment: 1,576 sq. ft.; 1 story residence.

Bldg. 2474
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010222
Status: Underutilized
Comment: 3,528 sq. ft.; 1 story residence.

Bldg. 2481
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010223
Status: Underutilized
Comment: 3,528 sq. ft.; 1 story residence.

Bldg. 2509
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010224
Status: Underutilized
Comment: 1,676 sq. ft.; 1 story residence.

Bldg. 2511
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010225
Status: Underutilized
Comment: 1,676 sq. ft.; 1 story residence.

Bldg. 2512
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010226
Status: Underutilized
Comment: 1,676 sq. ft.; 1 story residence.

Bldg. 2527
Laguna Housing Area
NAS Corpus Christi
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010227
Status: Underutilized
Comment: 1,676 sq. ft.; 1 story residence.

Brownsville Urban System
(Grantee)
700 South Iowa Avenue
Brownsville Co: Cameron TX 78520–
Landholding Agency: DOT
Property Number: 879010003
Status: Unutilized
Comment: 3,500 sq. ft., 1 story concrete block, (2nd floor of Admin. Bldg.) on 10750 sq. ft. land, contains underground diesel fuel tanks

Utah

Bryce Canyon Admin. Site
Near Bryce Canyon National Park
Bryce Canyon Co: Garfield UT 84717–
Landholding Agency: Interior
Property Number: 619140005
Status: Underutilized
Comment: 7 houses and other bldgs. on 66 acre site, seasonal use, one story wood frame structures, 48 thru 1400 sq. ft., environmentally protected.

Virginia

Tract HH 3331–E
John H. Kerr Reservoir
Woodframe House
South Boston Co: Halifax VA
Landholding Agency: COE
Property Number 319110027
Status: Excess
Comment: 1,040 sq. ft.; 1 story wood frame residence; off-site removal only.

Naval Medical Clinic
6500 Hampton Blvd.
Norfolk Co: Norfolk VA 23508–
Landholding Agency: Navy
Property Number 779010109
Status Unutilized
Comment: 3,665 sq ft., 1 story, possible asbestos, most recent use-laundry.

Washington

Naval Station Puget Sound
7500 Sand Point Way, NE
Seattle Co: King WA 98115–
Landholding Agency: 779120002
Status: Excess
Base closure, Number of Units: 1
Comment: 144 sq. ft. ammunition bunker, most recent use-storage, secured area with alternate access.

West Virginia

Naval & Marine Corps Res. Ctr.
N. 13th St & Ohio River
Wheeling Co: Ohio WV 26003–
Landholding Agency: Navy
Property Number 779010077
Status: Excess
Comment: 32,000 sq. ft.; 1 floor; most recent use—offices; 15% of total space occupied; needs rehab; land leased from city—expires September 1990.

Wisconsin

Former Lockmaster's Dwelling
DePere Lock
100 James Street
De Pere Co: Brown WI 54115–
Landholding Agency: COE
Property Number 319011526
Status: Unutilized
Comment: 1,224 sq. ft.; 2 story brick/wood frame residence; needs rehab; secured area with alternate access.

Wyoming

Administration Bldg.
Fontenelle Camp
Fontenelle Co: Lincoln WY
Location: Approximately 24 miles southeast of Labarge, off State Road 372 and on County Road 316.
Landholding Agency: Interior
Property Number: 619030017
Status: Excess
Comment: 4,464 sq. ft., 2 story brick structure with a 2800 sq. ft. wood frame addition, needs rehab, possible asbestos, off-site use only.

Bldg. 13
Medical Center
N.W. of town at the end of Fort Road
Sheridan Co: Sheridan WY 82801–
Landholding Agency: VA
Property Number 979110001
Status: Unutilized
Comment: 3,613 sq. ft., 3 story wood frame masonry veneered, potential utilities, possible asbestos, needs rehab.

Bldg. 79
Medical Center
N.W. of town at the end of Fort Road
Sheridan Co: Sheridan WY 82801–
Landholding Agency: VA
Property Number 979110003
Status: Unutilized
Comment: 45 sq. ft., 1 story brick and tile frame, limited utilities, most recent use-reservoir house, use for storage purposes.

Land (by State)

Arizona

Tract No. APO–HR–12–N–GSA–001
Central Arizona Project
Scottsdale Co: Maricopa AZ 85251–
Landholding Agency: Interior
Property Number: 619236002
Status: Excess
Comment: 16.22 acres, powerline and road easements, access subject to a private road, land near a historic landmark.

California

New Hogan Lake
2713 Hogan Dam Road
Valley Springs Co: Calaveras CA 95252–0128
Landholding Agency: COE
Property Number: 319011017
Status: Unutilized
Comment: 3.08 acres; potential utilities; brush covered.

Remote Transmitter
Section 35
Red Bluff Co: Tehama CA 96080–
Landholding Agency: DOT
Property Number: 879010010
Status: Unutilized
Comment: 4 acres, paved road, current use—storage.

Land
VA Medical Center
Wilshire and Sawtelle Boulevards
Los Angeles Co: Los Angeles CA 90073–
Landholding Agency: VA
Property Number: 979010077
Status: Underutilized
Comment: Approx. 30 acres of 80 acre tract, 7 acre portion contaminated, portions may be environmentally protected.

Florida

Naval Public Works Center
Naval Air Station
Pensacola Co: Escambia FL 32508–
Location: Southeast corner of Corey station—next to family housing.
Landholding Agency: Navy
Property Number: 779010157
Status: Unutilized
Comment: 22 acres.

Parcel A & B
U.S. Coast Guard Light Station
Lots 1, 8 & 11, Section 31
Jupiter Inlet Co: Palm Beach FL 33420–
Location: Township 40 south, range 43 east.
Landholding Agency: DOT
Property Number: 879010009
Status: Unutilized
Comment: 56.61 acres, area is uncleared, vegetation growth is heavy, no utilities.

Buffer Zone, VAMC
10,000 Bay Pines Blvd.
Bay Pines Co: Pinellas FL 33504–
Landholding Agency: VA
Property Number: 979230016
Status: Underutilized
Comment: Approx. 20 acres, storm water retention area.

Compound, VAMC
10,000 Bay Pines Blvd.
Bay Pines Co: Pinellas FL 33504–
Landholding Agency: VA
Property Number: 979230017
Status: Underutilized
Comment: Approx. 7 acres, storage compound, partially wooded.

Georgia

E. O. Tract A
J. Strom Thurmond Dam and Reservoir
(See County) Co: Columbia GA
Location: 3 miles east of GA 104 and Ridge Road intersection.
Landholding Agency: COE
Property Number: 319011516
Status: Unutilized
Comment: 17 acres; potential utilities; most recent use—forest and wildlife reserve.

E. O. Tract B
J. Strom Thurmond Dam and Reservoir
(See County) Co: Columbia GA
Location: 3 miles east of GA 104 and Ridge Road intersection.
Landholding Agency: COE
Property Number: 319011517
Status: Unutilized
Comment: 88 acres; potential utilities; most recent use—forest and wildlife reserve.

E. O. Tract F
J. Strom Thurmond Dam and Reservoir
(See County) Co: Columbia GA
Location: Approximately 2 miles east of GA 104 and Keg Creek Road intersection.
Landholding Agency: COE
Property Number: 319011519
Status: Unutilized
Comment: 29 acres; potential utilities; most recent use—forest and wildlife reserve.

E. O. Tract E
J. Strom Thurmond Dam and Reservoir
(See County) Co: Columbia GA
Location: Approximately 1½ miles east of GA 104 and Keg Creek Road intersection.
Landholding Agency: COE
Property Number: 319011520
Status: Unutilized
Comment: 12 acres; potential utilities; most recent use—forest reserve and wildlife management.

E. O. Tract G
J. Strom Thurmond Dam and Reservoir
(See County) Co: Columbia GA
Location: 4 miles east of GA 104 and Ridge Road intersection.
Landholding Agency: COE
Property Number: 319011521
Status: Unutilized
Comment: 8 acres; potential utilities; most recent use—forest and wildlife reserve.

E. O. Tract I
J. Strom Thurmond Dam and Reservoir
(See County) Co: Columbia GA
Location: 4 miles east of GA 104 and Ridge Road intersection.
Landholding Agency: COE
Property Number: 319011523
Status: Unutilized
Comment: 8 acres; potential utilities; most recent use—forest and wildlife reserve.

Naval Submarine Base
Grid AA–1 to AA–4 to EE–7 to FF–2
Kings Bay Co: Camden GA 31547–
Landholding Agency: Navy
Property Number: 779010255
Status: Underutilized
Comment: 495 acres; 86 acre portion located in floodway; secured area with alternate access.

Illinois

VA Medical Center
3001 Green Bay Road
North Chicago Co: Lake IL 60064–
Landholding Agency: VA
Property Number: 979010082
Status: Underutilized
Comment: 2.5 acres, currently being used as a construction staging area for the next 6–8 years, potential utilities.

Kentucky

Carr Fork Lake
5 miles SE of Hindman, Ky., Hwy. 60
Hindman Co: Knott KY
Landholding Agency: COE
Property Number: 319240003
Status: Unutilized
Comment: 2.81 acres, most recent use—drainage area for bank stabilization for adjacent cemetary.

Michigan

VA Medical Center
5500 Armstrong Road
Battle Creek Co: Clahoun MI 49016–
Landholding Agency: VA
Property Number: 979010015
Status: Underutilized
Comment: 20 acres, used as exercise trails and storage areas, potential utilities.

Minnesota

Bldg. 43 Land Site
VA Medical Center
54th Street & 48th Avenue South
Minneapolis Co: Hennepin MN 55417–
Landholding Agency: VA
Property Number: 979010005
Status: Underutilized
Comment: 8.9 acres, most recent use—parking, potential utilities.

Bldg. 227–229 Land
VA Medical Center
Fort Snelling
St Paul Co: Hennepin MN 55111–
Landholding Agency: VA
Property Number: 979010006
Status: Underutilized
Comment: 2.0 acres, potential utilities, buildings occupied, residence/garage.

VA Medical Center
Near 5629 Minnehaha Avenue
Minneapolis Co: Hennepin MN 55417–
Location: Land (Site of Building 15, 16, 21, 48, 64, T10)
Landholding Agency: VA
Property Number: 979010024
Status: Underutilized
Comment: 12.1 acres, most recent use—parking, potential utilities.

Land-12 acres
VAMC
Near 5629 Minnehaha Avenue
Minneapolis Co: Hennepin MN 55417–
Landholding Agency: VA
Property Number: 979010031
Status: Underutilized
Comment: 12 acres, possible asbestos, leased to Department of Natural Resources as a park walking trail.

New York

VA Medical Center
Fort Hill Avenue
Canandaigua Co: Ontario NY 14424–
Landholding Agency: VA
Property Number: 979010017
Status: Underutilized
Comment: 27.5 acres, used for school ballfield and parking, existing utilities easements, portion leased.

Oklahoma

45 acre parcel, Sardis Lake
SE¼ NE¼ Section 4, T 2 N, R 18 E Co: Pushmataha OK 74521–
Landholding Agency: COE
Property Number: 319140004
Status: Excess
Comment: approx. 45 acres, most recent use—fish and wildlife conservation.

Pennsylvania

East Branch Clarion River Lake
Wilcox Co: Elk PA
Location: Free camping area on the right bank off entrance roadway.
Landholding Agency: COE
Property Number: 319011012
Status: Underutilized
Comment: 1 acre; most recent use—free campground.

VA Medical Center
New Castle Road
Butler Co: Butler PA 16001–
Landholding Agency: VA
Property Number: 979010016
Status: Underutilized
Comment: Approx. 9.29 acres, used for patient recreation, potential utilities.

Land No. 645
VA Medical Center
Highland Drive
Pittsburgh Co: Allegheny PA 15206–
Location: Between Campania and Wiltsie Streets.
Landholding Agency: VA
Property Number: 979010080
Status: Unutilized
Comment: 52.42 acres, heavily wooded, property includes dump area and numerous site storm drain outfalls.

South Carolina

E.O. Tract J
J. Strom Thurmond Dam and Reservoir
(See County) Co: McCormick SC
Location: 4 miles southwest of Plum Branch SC on road to Clarks Mill Marina.
Landholding Agency: COE
Property Number: 319011514
Status: Unutilized
Comment: 57 acres; potential utilities; most recent use—forest and wildlife reserve.

E.O. Tract C
J. Strom Thurmond Dam and Reservoir
(See County) Co: McCormick SC
Location: Approximately 1 mile north of US 221 and SC 28 intersection.
Landholding Agency: COE
Property Number: 319011515
Status: Unutilized
Comment: 70 acres; potential utilities; most recent use—forest and wildlife reserve.

Texas

Part of Tract A–10
(See County) Co: Tarrant TX
Location: Off FM 2499 at north end of dam embankment
Landholding Agency: COE
Property Number: 319010390
Status: Excess
Comment: 0.29 acres; most recent use—parking lot.

Part of Tract 340
Joe Pool Lake
(See County) Co: Dallas TX
Landholding Agency: COE
Property Number: 319010400
Status: Unutilized
Comment: 1 acre; future use—recreation.

Virginia

Naval Base
Norfolk Co: Norfolk VA 23508–
Location: Northeast corner of base, near Willoughby housing area.
Landholding Agency: Navy
Property Number: 779010156
Status: Unutilized
Comment: 60 acres; most recent use—sandpit; secured area with alternate access.

Suitable/To Be Excessed

Buildings (by State)

California

Bldg. 100
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010259
Status: Unutilized
Comment: 2628 sq. ft.; 1 story permanent bldg; possible asbestos; secure facility with alternate access; use—office space.

Bldg. 102
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010260
Status: Unutilized
Comment: 580 sq. ft.; 1 story permanent bldg; possible asbestos; secure facility with alternate access; most recent use—office.

Bldg. 103
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010261
Status: Unutilized
Comment: 3675 sq. ft.; 1 story permanent bldg; possible asbestos; secure facility with alternate access; most recent use—dinning hall.

Bldg. 109
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010262
Status: Unutilized
Comment: 1045 sq. ft.; 2 story permanent bldg; possible asbestos; secure facility with alternate access; most recent use—barracks.

Bldg. 110
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010263
Status: Unutilized
Comment: 4439 sq. ft.; 1 story permanent bldg; possible asbestos; secure facility with alternate access; most recent use—shop.

Bldg. 113
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010264
Status: Unutilized
Comment: 100 sq. ft.; 1 story permanent bldg; possible secured facility with alternate access; most recent use—storage.

Bldg. 138
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010265
Status: Unutilized
Comment: 110 sq. ft.; 1 story permanent bldg; possible asbestos; secure facility with alternate access; most recent use—filing station.

Bldg. 144
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010268
Status: Unutilized
Comment: 4320 sq. ft.; 1 story permanent bldg; possible asbestos; secure facility with alternate access; most recent use—bowling alley.

Bldg. 145
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey Ca 93940–
Landholding Agency: Navy
Property Number: 779010267
Status: Unutilized
Comment: 4000 sq. ft.; 1 story semi-permanent bldg; possible asbestos secure facility with alternate access; most recent use—recreation building.

Massachusetts

Cuttyhunk Boathouse
South Shore of Cuttyhunk Pond
Gosnold Co: Dukes MA 02713–
Landholding Agency: DOT
Property Number: 879310001
Status: Unutilized
Comment: 2700 sq. ft., wood frame, one story, needs rehab, limited utilities, off-site use only.

Michigan

Former C. G. Lightkeeper Sta.
Little Rapids Channel Project
St. Marys River
Sault Ste. Marie Co: Chippewa MI 49783–
Location: 3 miles east of downtown Sault Ste. Marie.
Landholding Agency: DOE
Property Number: 319011573
Status: Excess
Comment: 1411 sq. ft.; 2 story; wood frame on .62 acres; needs rehab; secured area with alternate access.

New York

Former Damtender's House
East Sidney Lake
Franklin Co: Delaware NY 13775–
Location: Located on the corner of Triverfold Rd. and County Rd. 44
Landholding Agency: COE
Property Number: 319210007
Status: Excess
Comment: 1605 sq. ft., 2 story wood frame residence with 1 acre of land, asbestos shingle siding.

South Carolina

Bldg. #1 U.S. Coast Guard
Folly Island Loran Station
Folly Island Co: Charleston SC 29401–
Landholding Agency: DOT
Property Number: 879120096
Status: Unutilized
Comment: 2050 sq. ft., 1 story concrete block, most recent use—communications station.

Bldg. #2 U.S. Coast Guard
Folly Island Loran Station
Folly Island Co: Charleston SC 29401–
Landholding Agency: DOT
Property Number: 879120097
Status: Unutilized
Comment: 2050 sq. ft., 1 story concrete block, most recent use—communications station.

Land (by State)

Arizona

Land—APO–GR–12–26A–09
120 Street and Mountain View
Scottsdale Co: Maricopa AZ 85259–
Location: South of Shea Boulevard and East of 120th Street
Landholding Agency: Interior
Property Number: 619240002
Status: Unutilized
Comment: 4.75 acres, easement restrictions, most recent use—acquired for construction of CAP canal.

Illinois

Libertyville Training Site
Libertyville Co: Lake IL 60048–
Landholding Agency: Navy
Property Number: 779010073
Status: Excess
Comment: 114 acres; possible radiation hazard; existing PAA use license.

Indiana

Cecil M. Harden Lake Project
Rockville Co: Parke IN 47872–
Location: Route 57 at intersection w/county road 910E.
Landholding Agency: COE
Property Number: 319011689
Status: Excess
Comment: 2.68 acres; narrow triangular shaped area of land.

Tracts 903, 905, 905–C
Patoka Lake Project
Taswell Co: Crawford IN 47527–
Location: From French Lick, IN, take SR 145S for 10 miles. to intersection with SR 164, property lies east and adjacent to highway 145.
Landholding Agency: COE
Property Number: 319030003
Status: Excess
Comment: 22.35 acres; limited utilities.

Tracks 142–A, 143
Patoka Lake Project
Dubois Co: Dubois IN 47527–9661
Location: From French Lick, IN take SR 145 S. for 20 miles to SR 164, go west on 164 for 7 miles to Celestine Road, go North on Celestine for 5 miles to Dubois Co. Road 475, then right for 1/4 mile to property.
Landholding Agency: COE
Property Number: 319030004
Status: Excess
Comment: 21.30 acres; limited utilities; subject to periodic flooding

Track 142–B
Patoka Lake Project
Dubois Co: Dubois IN 47527–9661
Location: From French Lick, IN take SR 145 S for 20 miles to SR 164, go west on 164 for 7 miles to Celestine Road, go North on Celestine for 5 miles to Dubois Co. Road 475, then right for 1/4 mile to property.
Landholding Agency: COE
Property Number: 319030005
Status: Excess
Comment: 4.74 acres; limited utilities; subject to periodic flooding.

Track 601
Patoka Lake Project
French Lick Co: Orange IN 47527–
Location: IN. State Highway 145 south to Jordan Branch Road, Property abuts east right-of-way for Jordan Road.
Landholding Agency: COE
Property Number: 319030006
Status: Excess
Comment: 0.41 acre; limited utilities.

Kansas

Parcel #1
Fall River Lake
Section 26
(See County) Co: Greenwood KS
Landholding Agency: COE
Property Number: 319010065
Status: Excess
Comment: 155 acres; most recent use—recreation and leased cottage sites.

Parcel #2
Fall River Lake
Section 25 and 26
(See County) Co: Greenwood KS
Landholding Agency: COE
Property Number: 319010066
Status: Excess
Comment: 38.62 acres; most recent use-recreation

Parcel #3
Fall River Lake
Section 26
(See County) Co: Greenwood KS
Landholding Agency: COE
Property Number: 319010067
Status: Excess
Comment: 22.44 acres; most recent use-recreation.

Parcel No. 2, El Dorado Lake
Approx. 1 mi east of the town of El Dorado
Co: Butler KS
Landholding Agency: COE
Property Number: 319210005
Status: Unutilized
Comment: 11 acres, part of a relocated railroad bed, rural area.

Kentucky

Tract B—Markland Locks & Dam
Hwy 42, 3.5 miles downstream of Warsaw
Warsaw Co: Gallatin KY 41095–
Landholding Agency: COE
Property Number: 319130002
Status: Unutilized
Comment: 10 acres, most recent use—recreational, possible periodic flooding.

Tract A—Markland Locks & Dam
Hwy 42, 3.5 miles downstream of Warsaw
Warsaw Co: Gallatin KY 41095–
Landholding Agency: COE
Property Number: 319130003
Status: Unutilized
Comment: 8 acres, most recent use—recreational, possible periodic flooding.

Tract C—Markland Locks & Dam
Hwy 42, 3.5 miles downstream of Warsaw
Warsaw Co: Gallatin KY 41095–

Landholding Agency: COE
Property Number: 319130005
Status: Unutilized
Comment: 4 acres, most recent use—recreational, possible periodic flooding.

Massachusetts

Buffumville Dam
Flood Control Project
Gale Road
Carlton Co: Worcester MA 01540–0155
Location: Portion of tracts B–200, B–248, B–251, B–204, B–247, B–200 and B–256
Landholding Agency: COE
Property Number: 319010016
Status: Excess
Comment: 1.45 acres.

Conant Brook Dam
Flood Control Dam
Wales Road
Monson Co: Hampden MA 01057–
Location: Portion of Tract 211
Landholding Agency: COE
Property Number: 319010017
Status: Excess
Comment: 5.27 acres.

Hodges Village
Dam Flood Control Project
Old Howarth Road
Oxford Co: Worcester MA 01540–0500
Location: Portion of Tract A–108, See Project Manager at Hodges Village Dam, Oxford, MA (508) 987–2600.
Landholding Agency: COE
Property Number: 319011006
Status: Excess
Comment: 6.02 acres; 3 acres paved road, subject to utility easement.

Michigan

Marine Corps Reserve Center
3109 Collingwood Parkway
Flint MI 48502–
Landholding Agency: Navy
Property Number: 779240019
Status: Excess
Comment: 5 acres, previously had four bldgs on it.

Marine Corps Reserve Center
3109 Collingwood Parkway
Flint MI 48502–
Landholding Agency: Navy
Property Number: 779240019
Status: Excess
Comment: 5 acres, previously had four bldgs on it.

U.S. Coast Guard—Air Station
Traverse City Co: Grand Traverse MI 49684–
Landholding Agency: DOT
Property Number: 879120099
Status: Underutilized
Comment: 21.7 acres, most recent use—helo landings.

Minnesota

Land around Bldg. 204–249, 253
VA Medical Center
Fort Snelling
St. Paul Co: Hennepin MN 55111–
Landholding Agency: VA
Property Number: 979010007
Status: Unutilized
Comment: 3.76 acres, potential utilities.

Montana

0.01 acre, Fort Peck Lake Proj Co: Valley MT
Location: Twp 27 north, RNG 41 east, Section 33, E/2SE/4NW/4NE/4
Landholding Agency: COE
Property Number: 319220002
Status: Excess
Comment: 0.01 acre, small triangular parcel, rough/steep terrain.

0.05 acre, Fort Peck Lake Proj Co: Valley MT
Location: Twp 27 north, RNG 41 east, Section 33, E/2SE/4NW/4NE/4
Landholding Agency: COE
Property Number: 319220003
Status: Excess
Comment: 0.05 acre, narrow strip next to highway, steep/rough terrain.

122.60 acres
Fort Peck Lake Project Co: McCone MT
Location: Twp 26 north, RNG 42 east, Section 4, Lot 3, SW/4NE/4SE/4NW/4
Landholding Agency: COE
Property Number: 319220004
Status: Excess
Comment: 122.60 acres, rough & rugged terrain, grazing allotment administered by Bureau of Land Management.

120 acres, Fort Peck Lake Proj Co: McCone MT
Location: Twp 21 north, RNG 43 east, Section 34, N/2NE/4, Section 35, NW/4NW/4
Landholding Agency: COE
Property Number: 319220005
Status: Unutilized
Comment: 120.00 acres, rough & rugged terrain.

Ohio

Middleport Public Access Site
Gallipolis Locks & Dam
Middleport Co: Meigs OH 45760–
Landholding Agency: COE
Property Number: 319230001
Status: Underutilized
Comment: Approximately 17.23 acres including parking lot, flowage easement, right-of-way for city street and utilities.

Oklahoma

Parcel No. 7
Kaw Lake
Section 27
(See County) Co: Kay OK
Landholding Agency: COE
Property Number: 319010842
Status: Excess
Comment: 21 acres; potential utilities; most recent use—recreation.

Pennsylvania

Dashields Locks and Dam
(Glenwillard, PA)
Crescent Twp. Co: Allegheny PA 15046–0475
Landholding Agency: COE
Property Number: 319210009
Status: Unutilized
Comment: 0.58 acres, most recent use—baseball field.

South Carolina

Land—U.S. Coast Guard
Folly Island Loran Station
Folly Island Co: Charleston SC 29401–
Landholding Agency: DOT
Property Number: 879120098
Status: Unutilized
Comment: 55 acres (38 acres submerged) tidal marshland, potential utilities.

Tennessee

Tract D–456
Cheatham Lock and Dam
Ashland Co: Cheatham TN 37015–
Location: Right downstream bank of Sycamore Creek.
Landholding Agency: COE
Property Number: 319010842
Status: Excess
Comment: 8.93 acres; subject to existing easements.

Texas

Tract J–957
Whitney Lake
Bosque Co: Bosque TX
Location: Via Avenue B within the community of Kopperl.
Landholding Agency: COE
Property Number: 319110029
Status: Unutilized
Comment: .18 acres; potential utilities; encroachments on large portion of property.

Tract J–936
Whitney Lake
Bosque Co: Bosque TX
Location: Off F. M. Highway 56 within the community of Kopperl.
Landholding Agency: COE
Property Number: 319110032
Status: Unutilized
Comment: 5.4 acres; potential utilities.

Tract F–516 O.C. Fisher Lake
Parallel with Grape Creek Road
San Angelo Co: Tom Green TX 76902–3065
Landholding Agency: COE
Property Number: 319120002
Status: Unutilized
Comment: 2.13 acres, potential limited utilities.

Part of Tract 102 Segment 1
Bardwell Dam Road
Ennis Co: Ellis TX 75119–
Landholding Agency: COE
Property Number: 319140014
Status: Unutilized
Comment: Approx. 6.38 acres.

Parts of Tracts
B–143, B–144, B–146, B–148, B–179
Downstream of Lewisville Dam embankment
Lewisville Co: Denton TX 75067–
Location: Along State Hwy 121
Landholding Agency: COE
Property Number: 319140015
Status: Underutilized
Comment: Approx. 94.28 acres in 3 parcels, most recent use—wildlife and low density recreation.

Corpus Christi Ship Channel
Corpus Christi Co: Nueces TX
Location: East side of Carbon Plant Road, approx. 14 miles NW of downtown Corpus Christi
Landholding Agency: COE
Property Number: 319240001
Status: Unutilized
Comment: 4.4 acres, most recent use—farm land.

Unsuitable Properties

Buildings (by State)

Alabama

Dwelling A

USCG Mobile Pt. Station
Ft. Morgan
Gulfshores Co: Baldwin AL 36542–
Landholding Agency: DOT
Property Number: 879120001
Status: Excess
Reason: Floodway.

Dwelling B
USCG Mobile Pt. Station
Ft. Morgan
Gulfshores Co: Baldwin AL 36542–
Landholding Agency: DOT
Property Number: 879120002
Status: Excess
Reason: Floodway.

Oil House
USCG Mobile Pt. Station
Ft. Morgan
Gulfshores Co: Baldwin AL 36542–
Landholding Agency: DOT
Property Number: 87912003
Status: Excess
Reason: Floodway.

Garage
USCG Mobile Pt. Station
Ft. Morgan
Gulfshores Co: Baldwin AL 36542–
Landholding Agency: DOT
Property Number: 879120004
Status: Excess
Reason: Floodway.

Shop Building
USCG Mobile Pt. Station
Ft. Morgan
Gulfshores Co: Baldwin AL 36542–
Landholding Agency: DOT
Property Number: 879120005
Status: Excess
Reason: Floodway.

Alaska

Sand Shed, Map Grid 45024
Naval Air Station
Adak Co: Adak AK 98791–
Landholding Agency: Navy
Property Number: 779120004
Status: Unutilized
Reason: Secured Area.

LORAN Station, Map Grid 09L11
Naval Air Station
Adak Co: Adak AK 98791–
Landholding Agency: Navy
Property Number: 779120006
Status: Unutilized
Reason: Secured Area.

Bldg. 28
USGC Support Center
Kodiak Co: Kodiak Island AK 99619–5000
Landholding Agency: DOT
Property Number: 879210126
Status: Excess
Reason: Within airport runway clear zone; secured area.

Bldg. 24
USGC Support Center
Kodiak Co: Kodiak Island AK 99619–5000
Landholding Agency: DOT
Property Number: 879210127
Status: Excess
Reason: Within airport runway clear zone; secured area; within 2000 ft. of flammable or explosive material.

Bldg. 19
USCG Support Center
Kodiak Co: Kodiak Island AK 99619–5000
Landholding Agency: DOT
Property Number: 879210128
Status: Excess
Reason: Within airport runway clear zone; secured area; other
Comment: Extensive deterioration.

Bldg. 94
USCG Support Center
Kodiak Co: Kodiak Island AK 99619–5000
Landholding Agency: DOT
Property Number: 879210129
Status: Excess
Reason: Secured area; other
Comment: Extensive deterioration.

Bldg. 85
USCG Support Center
Kodiak Co: Kodiak Island AK 99619–5000
Landholding Agency: DOT
Property Number: 879210130
Status: Excess
Reason: Secured area; other
Comment: Extensive deterioration.

Bldg. 18
USCG Support Center
Kodiak Co: Kodiak Island AK 99619–5000
Landholding Agency: DOT
Property Number: 879210132
Status: Excess
Reason: Secured area; within airport runway clear zone
GSA Number: U–ALAS–655A.

Bldg. A512
USCG Support Center
Kodiak Co: Kodiak Island AK 99619–5000
Landholding Agency: DOT
Property Number: 879210133
Status: Excess
Reason: Secured area; within airport runway clear zone; within 2000 ft. of flammable or explosive material.

California

Bldg. 4310–A
Redwood National Park
1409 P.J. Murphy Memorial Drive
Klamath Co: Del Norte CA 95548–
Landholding Agency: Interior
Property Number: 619240001
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Wilsonia Lodge Rental Cabins
Grant Grove
Kings Canyon National Park Co: Tulare CA 93633–
Landholding Agency: Interior
Property Number: 619310001
Status: Unutilized
Reason: Other
Comment: Structural damage.

Bldg. 105
Naval FPS, CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010159
Status: Unutilized
Reason: Within 2000 ft. of flammable or explosive material.

Bldg. 165
Naval FPS, CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010160
Status: Unutilized
Reason: Within 2000 ft. of flammable or explosive material.

Bldg. 146
Naval Facilities Point Sur
CVB Detachment
Monterey Co: Monterey CA 93940–
Landholding Agency: Navy
Property Number: 779010268
Status: Unutilized
Reason: Other
Comment: Sewer treatment facility.

Naval Hospital (10 bldgs.)
Long Beach Naval Hospital
Long Beach Co: Los Angeles CA 90822–5199
Landholding Agency: Navy
Property Number: 779310038
Status: Excess
Base closure Number of Units: 10
Reason: Floodway.

Bldg. 10, USCG Support Center
Coast Guard Island
Alameda Co: Alameda CA 94501–5100
Landholding Agency: DOT
Property Number: 879210134
Status: Excess
Reason: Secured area.

Colorado

Former Spickerman House
Bear Creek Lake
Lakewood Co: Jefferson CO
Landholding Agency: COE
Property Number: 319240013
Status: Unutilized
Reason: Floodway; other
Comment: Extensive deterioration.

Alemeda Facility
350 S. Santa Fe Drive
Denver Co: Denver CO 80223–
Landholding Agency: DOT
Property Number: 879010014
Status: Unutilized
Reason: Other environmental
Comment: Contamination.

Connecticut

Falkner Island Light
U.S. Coast Guard
Guilford Co: New Haven CT 06512–
Landholding Agency: DOT
Property Number: 879240031
Status: Unutilized
Reason: Floodway.

Florida

East Martello Bunker #1
Naval Air Station
Key West Co: Monroe FL 33040–
Landholding Agency: Navy
Property Number: 779010101
Status: Excess
Reason: Within airport runway clear zone.

Bldg. #3, Recreation Cottage
USCG Station
Marathon Co: Monroe FL 33050–
Landholding Agency: DOT
Property Number: 879210008
Status: Unutilized
Reason: Secured Area; floodway.

Bldg. 103, Trumbo Point
Key West Co: Monroe FL 33040–
Landholding Agency: DOT
Property Number: 879230001
Status: Unutilized
Reason: Floodway; secured area.

LORAN "A" Station
Radio Beacon Hobe Sound
Jupiter Island Co: Martin FL

Landholding Agency: DOT
Property Number: 879230003
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Fuel Facility, Coast Guard
Miami Air Station, OPA Locka Airport
OPA Locka Co: Dade FL 33054–2397
Landholding Agency: DOT
Property Number: 879240004
Status: Unutilized
Reason: Secured area.

Pyro & Paint Locker Bldgs.
Key West Co: Monroe FL 33040–
Landholding Agency: DOT
Property Number: 879240017
Status: Unutilized
Reason: Floodway; secured area.

Georgia

Naval Submarine Base—Kings Bay
1011 USS Daniel Boone Avenue
Kings Bay Co: Camden GA 31547–
Landholding Agency: Navy
Property Number: 779010107
Status: Unutilized
Reason: Secured area.

Guam

Bldg. 96
U.S. Naval Ship Repair Facility
PSC 455 Co: Box 191, FPO AP GU 96540–1400
Landholding Agency: Navy
Property Number: 779240018
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Hawaii

Bldg. 126, Naval Magazine
Waikele Branch
Lualualei Co: Oahu HI 96792–
Landholding Agency: Navy
Property Number: 779230012
Status: Unutilized
Reason: Secured Area; within 2000 ft. of flammable or explosive material; other
Comment: Extensive deterioration.

Bldg. Q75, Naval Magazine
Lualualei Branch
Lualualei Co: Oahu HI 96792–
Landholding Agency: Navy
Property Number: 779230013
Status: Unutilized
Reason: Secured Area; other
Comment: Extensive deterioration.

Bldg. 7, Naval Magazine
Lualualei Branch
Lualualei Co: Oahu HI 96792–
Landholding Agency: Navy
Property Number: 779230014
Status: Unutilized
Reason: Secured area; other
Comment: Extensive deterioration.

Bathhouse—Wailupe Quarters
U.S. Coast Guard
Honolulu Co: Honolulu HI 96821–
Landholding Agency: DOT
Property Number: 879240033
Status: Unutilized
Reason: Other; secured area.
Comment: Extensive deterioration.

Maint. Shop—Wailupe Quarters
U.S. Coast Guard
Honolulu Co: Honolulu HI 96821–
Landholding Agency: DOT
Property Number: 879240034
Status: Unutilized
Reason: Other; secured area.
Comment: Extensive deterioration.

Illinois

Bldg. 928
Naval Training Center
Great Lakes
Great Lakes Co: Lake IL 60088–
Landholding Agency: Navy
Property Number: 779010120
Status: Underutilized
Reason: Secured area.

Bldg. 28
Naval Training Center
Great Lakes
Great Lakes Co: Lake IL 60088–
Landholding Agency: Navy
Property Number: 779010123
Status: Unutilized
Reason: Secured area.

Bldg. 25
Naval Training Center
Great Lakes
Great Lakes Co: Lake IL 60088–
Landholding Agency: Navy
Property Number: 779010126
Status: Unutilized
Reason: Secured area.

South Wing—Building No. 62
Great Lakes Co: Lake IL 60088–5000
Landholding Agency: Navy
Property Number: 779110001
Status: Underutilized
Reason: Secured area.

Bldg. 235
Naval Training Center
Great Lakes Co: Lake IL
Landholding Agency: Navy
Property Number: 779310039
Status: Unutilized
Reason: Secured area.

Bldg. 2B
Naval Training Center
Great Lakes Co: Lake IL
Landholding Agency: Navy
Property Number: 779310040
Status: Unutilized
Reason: Secured area.

Bldg. 90
Naval Training Center
Great Lakes Co: Lake IL
Landholding Agency: Navy
Property Number: 779310041
Status: Unutilized
Reason: Secured Area.

Bldg. 232
Naval Training Center
Great Lakes Co: Lake IL
Landholding Agency: Navy
Property Number: 779310042
Status: Unutilized
Reason: Secured Area.

Bldg. 233
Naval Training Center
Great Lakes Co: Lake IL
Landholding Agency: Navy
Property Number: 779310043
Status: Unutilized
Reason: Secured Area.

Bldg. 234
Naval Training Center
Great Lakes Co: Lake IL
Landholding Agency: Navy
Property Number: 779310044
Status: Unutilized
Reason: Secured Area.

Indiana

Loran Station DANA
Dana Co: Vermillion IN 47847–
Landholding Agency: DOT
Property Number: 879240016
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Bldg. 21, VA Medical Center
East 38th Street
Marion Co: Grant IN 46952–
Landholding Agency: VA
Property Number: 979230001
Status: Underutilized
Reason: Other
Comment: Extensive deterioration.

Bldg. 22, VA Medical Center
East 38th Street
Marion Co: Grant IN 46952–
Landholding Agency: VA
Property Number: 979230002
Status: Underutilized
Reason: Other
Comment: Extensive deterioration.

Bldg. 62, VA Medical Center
East 38th Street
Marion Co: Grant IN 46952–
Landholding Agency: VA
Property Number: 979230003
Status: Underutilized
Reason: Other
Comment: Extensive deterioration.

Kentucky

Spring House
Kentucky River Lock and Dam No. 1
Highway 320
Carrollton Co: Carroll KY 41008–
Landholding Agency: COE
Property Number: 219040416
Status: Unutilized
Reason: Other
Comment: Spring House.

Building
Kentucky River Lock and Dam No. 4
1021 Kentucky Avenue
Frankfort Co: Franklin KY 40601–9999
Landholding Agency: COE
Property Number: 219040417
Status: Unutilized
Reason: Other
Comment: Coal storage.

Building
Kentucky River Lock and Dam No. 4
1021 Kentucky Avenue
Frankfort Co: Franklin KY 40601–9999
Landholding Agency: COE
Property Number: 219040418
Status: Unutilized
Reason: Other
Comment: Coal storage.

Barn
Kentucky River Lock and Dam No. 3
Highway 561
Pleasureville Co: Henry KY 40057–
Landholding Agency: COE
Property Number: 219040419
Status: Underutilized
Reason: Other

Comment: 110 year old barn with crumbled foundation.

Tract 111—Building
Martins Fork Lake
Smith Co: Harlan KY 40867–
Location: 13 miles southeast of Harlan on Highway 987.
Landholding Agency: COE
Property Number: 319010062
Status: Unutilized
Reason: Floodway.

Latrine
Kentucky River Lock and Dam Number 3
Highway 561
Pleasureville Co: Henry KY 40057–
Landholding Agency: COE
Property Number: 319040009
Status: Unutilized
Reason: Other
Comment: Detached latrine.

6-Room Dwelling
Green River Lock and Dam No. 3
Rochester Co: Butler KY 42273–
Location: Off State Hwy 369, which runs off of Western Ky. Parkway
Landholding Agency: COE
Property Number: 319120010
Status: Unutilized
Reason: Floodway.

2-Car Garage
Green River Lock and Dam No. 3
Rochester Co: Butler KY 42273–
Location: Off State Hwy 369, which runs off of Western Ky. Parkway
Landholding Agency: COE
Property Number: 319120011
Status: Unutilized
Reason: Floodway.

Office and Warehouse
Green River Lock and Dam No. 3
Rochester Co: Butler KY 42273–
Location: Off State Hwy 369, which runs off of Western Ky. Parkway
Landholding Agency: COE
Property Number: 319120012
Status: Unutilized
Reason: Floodway.

2 Pit Toilets
Green River Lock and Dam No. 3
Rochester Co: Butler KY 42273–
Landholding Agency: COE
Property Number: 319120013
Status: Unutilized
Reason: Floodway.

Maine

Bldg. 7, Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230004
Status: Excess
Reason: Within airport runway clear zone; secured area.

Bldg. 10, Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230005
Status: Excess
Reason: Within airport runway clear zone; floodway.

Bldg. 93, Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230006
Status: Excess
Reason: Secured area.

Bldg. 614, Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230007
Status: Excess
Reason: Secured area.

Bldgs. 101–107
Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230008
Status: Excess
Reason: Secured area.

Bldg. 186
Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230009
Status: Excess
Reason: Secured area.

Bldg. 192
Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230010
Status: Excess
Reason: Secured area.

Bldgs. 202–208
Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779230011
Status: Excess
Reason: Secured area.

Bldg. 293, Naval Air Station
Brunswick Co: Cumberland ME 04011–
Landholding Agency: Navy
Property Number: 779240015
Status: Excess
Reason: Secured area.

Supply Bldg., Coast Guard
Southwest Harbor
Southwest Harbor Co: Hancock ME 04679–5000
Landholding Agency: DOT
Property Number: 879240005
Status: Unutilized
Reason: Floodway.

Base Exchange, Coast Guard
Southwest Harbor
Southwest Harbor Co: Hancock ME 04679–5000
Landholding Agency: DOT
Property Number: 879240006
Status: Unutilized
Reason: Floodway.

Engineering Shop, Coast Guard
Southwest Harbor
Southwest Harbor Co: Hancock ME 04679–5000
Landholding Agency: DOT
Property Number: 879240007
Status: Unutilized
Reason: Floodway.

Storage Bldg., Coast Guard
Southwest Harbor
Southwest Harbor Co: Hancock ME 04679–5000
Landholding Agency: DOT
Property Number: 879240008
Status: Unutilized
Reason: Floodway.

Herron Neck Light
U.S. Coast Guard
Southwest Harbor
Vinalhaven Co: Knox ME 04841–
Landholding Agency: DOT
Property Number: 879240028
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Burnt Coat Harbor Light
U.S. Coast Guard
Swans Island Co: Hancock ME 04685–
Landholding Agency: DOT
Property Number: 879240030
Status: Unutilized
Reason: Floodway.

Squirrel Point Light
U.S. Coast Guard
Phippsburg Co: Sayadahoc ME 04530–
Landholding Agency: DOT
Property Number: 879240032
Status: Unutilized
Reason: Floodway.

Keepers Dwelling
Heron Neck Light, U.S. Coast Guard
Vinalhaven Co: Knox ME 04841–
Landholding Agency: DOT
Property Number: 879240035
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Massachusetts

Bldg. 4, USCG Support Center
Commercial Street
Boston Co: Suffolk, MA 02203–
Landholding Agency: DOT
Property Number: 879240001
Status: Underutilized
Reason: Secured area.

Eastern Point Light
U.S. Coast Guard
Gloucester Co: Essex MA 01930–
Landholding Agency: DOT
Property Number: 879240029
Status: Unutilized
Reason: Floodway; secured area.

Michigan

Bldg. 402, U.S. Air Station
Traverse City Co: Grand Traverse MI 49684–5500
Landholding Agency: DOT
Property Number: 879220001
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Bldg. 2, Sardet Holland
Coast Guard
2388 Ottawa Beach Rd. SW
Holland Co: Ottawa MI 49424–
Landholding Agency: DOT
Property Number: 879240002
Status: Unutilized
Reason: Secured Area.

Bldg. 1, Sardet Holland
Coast Guard
2388 Ottawa Beach Rd., SW
Holland Co: Ottawa MI 49424–
Landholding Agency: DOT
Property Number: 879240003
Status: Unutilized
Reason: Secured Area.

Missouri

Bldg. 67, Storage Bunker
2000 East 95th Street

Kansas City Co: Jackson MO 64131–
Landholding Agency: Energy
Property Number: 419220004
Status: Unutilized
Reason: Floodway.

Nebraska

Papio Dam Site 18
Papio Creek and Tributaries
Omaha Co: Douglas NE 68130–
Landholding Agency: COE
Property Number: 319240009
Status: Unutilized
Reason: Floodway; other
Comment: Extensive deterioration.

New Jersey

Piers and Wharf
Station Sandy Hook
Highlands Co: Monmouth NJ 07732–5000
Landholding Agency: DOT
Property Number: 879240009
Status: Unutilized
Reason: Other; secured area
Comment: Extensive deterioration.

New Mexico

Farmington Office and Yard
900 La Plata Highway
Farmington Co: San Juan NM 87499–
Landholding Agency: Interior
Property Number: 619010001
Status: Unutilized
Reason: Within airport runway clear zone.

New York

Bldg. 204
Naval Underwater Systems Center
Fisher's Island Annex Detachment
Fisher's Island Co: Suffolk NY 06390–
Landholding Agency: Navy
Property Number: 779010270
Status: Excess
Reason: Secured Area.

Bldg. 255
Naval Underwater Systems Center
Fisher's Island Annex Detachment
Fisher's Island Co: Suffolk NY 06390–
Landholding Agency: Navy
Property Number: 779010271
Status: Excess
Reason: Secured Area.

Bldg. T–370
Naval Underwater Systems Center
Fisher's Island Annex Detachment
Fisher's Island Co: Suffolk NY 06390–
Landholding Agency: Navy
Property Number: 779010272
Status: Excess
Reason: Secured Area.

2 Buildings
Ant Saugerties
Saugerties Co: Ulster NY 12477–
Landholding Agency: DOT
Property Number: 879230005
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Bldg. 605, USCG Station
Fort Totten
New York Co: Queens NY 11359–
Landholding Agency: DOT
Property Number: 879240010
Status: Excess
Reason: Secured Area.

Bldg. 606, USCG Station
Fort Totten
New York Co: Queens NY 11359–
Landholding Agency: DOT
Property Number: 879240011
Status: Excess
Reason: Secured Area.

Bldg. 607, USCG Station
Fort Totten
New York Co: Queens NY 11359–
Landholding Agency: DOT
Property Number: 879240012
Status: Excess
Reason: Secured Area.

Bldg. 606, Fort Totten
New York Co: Queens NY 11359–
Landholding Agency: DOT
Property Number: 879240020
Status: Unutilized
Reason: Secured Area.

Bldg. 607, Fort Totten
New York Co: Queens NY 11359–
Landholding Agency: DOT
Property Number: 879240021
Status: Unutilized
Reason: Secured Area; other
Comment: Extensive deterioration.

Bldg. 605, Fort Totten
New York Co: Queens NY 11359–
Landholding Agency: DOT
Property Number: 879240022
Status: Unutilized
Reason: Secured Area; other
Comment: Extensive deterioration.

Eatons Neck Station
U.S. Coast Guard
Huntington Co: Suffolk NY 11743–
Landholding Agency: DOT
Property Number: 879310003
Status: Unutilized
Reason: Other; secured area
Comment: Extensive deterioration.

North Carolina

Group Cape Hatteras
Boiler Plant
Buxton Co: Dare NC 27902–0604
Landholding Agency: DOT
Property Number: 879240018
Status: Unutilized
Reason: Secured Area.

Group Cape Hatteras
Bowling Alley
Buxton Co: Dare NC 27902–0604
Landholding Agency: DOT
Property Number: 879240019
Status: Unutilized
Reason: Secured Area.

Bldg. 9
VA Medical Center
1100 Tunnel Road
Asheville Co: Buncombe NC 28805–
Landholding Agency: VA
Property Number: 979010008
Status: Underutilized
Reason: Other
Comment: Friable asbestos.

Ohio

William H. Harsha Lake Bldg.
3782 Williamsburg-Bantam Road
Batavia Co: Clermont OH 45106–
Landholding Agency: COE
Property Number: 319240011
Status: Unutilized
Reason: Other
Comment: Structural damage.

Oregon

Eugene District Office Site
751 South Danebo
Eugene Co: Lane OR 97402–
Landholding Agency: Interior
Property Number: 619010003
Status: Underutilized
Reason: Within 2000 ft. of flammable or explosive material.

Pennsylvania

Bldg. 62
Philadelphia Naval Shipyard
Philadelphia Co: Philadelphia PA 19112–
Landholding Agency: Navy
Property Number: 779010112
Status: Unutilized
Reason: Within 2000 ft. of flammable or explosive material. Secured Area.

Rhode Island

Bldg. 32
Naval Underwater Systems Center
Gould Island Annex
Middletown Co: Newport RI 02840–
Landholding Agency: Navy
Property Number: 779010273
Status: Excess
Reason: Secured Area.

Tennessee

Bldg. 204
Cordell Hull Lake and Dam Project
Defeated Creek Recreation Area
Carthage Co: Smith TN 37030–
Location: US Highway 85
Landholding Agency: COE
Property Number: 319011499
Status: Unutilized
Reason: Floodway.

Tract 2618 (Portion)
Cordell Hull Lake and Dam Project
Roaring River Recreation Area
Gainesboro Co: Jackson TN 38562–
Location: TN Highway 135
Landholding Agency: COE
Property Number: 319011503
Status: Underutilized
Reason: Floodway.

Water Treatment Plant
Dale Hollow Lake & Dam Project
Obey River Park, State Hwy 42
Livingston Co: Clay TN 38351–
Landholding Agency: COE
Property Number: 319140011
Status: Excess
Reason: Other
Comment: Water treatment plant.

Water Treatment Plant
Dale Hollow Lake & Dam Project
Lillydale Recreation Area, State Hwy 53
Livingston Co: Clay TN 38351–
Landholding Agency: COE
Property Number: 319140012
Status: Excess
Reason: Other
Comment: Water treatment plant.

Water Treatment Plant
Dale Hollow Lake & Dam Project
Willow Grove Recreational Area, Hwy No. 53
Livingston Co: Clay TN 38351–
Landholding Agency: COE
Property Number: 319140013
Status: Excess
Reason: Other

Comment: Water treatment plant.

Bldg. 60, VAMC Mountain Home
Johnson Co: Washington TN 37604–
Landholding Agency: VA
Property Number: 979220005
Status: Unutilized
Reason: Other
Comment: Extensive deterioration.

Texas

Bldg. (off-site installation)
Bergstrom Air Force Base
Off Farm to Market Road 812
Austin Co: Travis TX 78743–5000
Landholding Agency: Air Force-BC
Property Number: 199310003
Status: Excess
Base closure—Number of units: 1
Reason: Other
Comment: Extensive deterioration.

Bldg. 2426
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010279
Status: Underutilized
Reason: Floodway.

Bldg. 2432
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010280
Status: Underutilized
Reason: Floodway.

Bldg. 2476
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010281
Status: Underutilized
Reason: Floodway.

Bldg. 2498
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010282
Status: Underutilized
Reason: Floodway.

Bldg. 2504
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010283
Status: Underutilized
Reason: Floodway.

Bldg. 1730
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010284
Status: Underutilized
Reason: Floodway.

Bldg. 2422
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010285
Status: Underutilized
Reason: Floodway.

Bldg. 2425
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010286
Status: Underutilized
Reason: Floodway.

Bldg. 2430
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010287
Status: Underutilized
Reason: Floodway.

Bldg. 2434
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010288
Status: Underutilized
Reason: Floodway.

Bldg. 2449
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010289
Status: Underutilized
Reason: Floodway.

Bldg. 2450
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010290
Status: Underutilized
Reason: Floodway.

Bldg. 2453
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010291
Status: Underutilized
Reason: Floodway.

Bldg. 2455
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010292
Status: Underutilized
Reason: Floodway.

Bldg. 2456
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010293
Status: Underutilized
Reason: Floodway.

Bldg. 2463
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010294
Status: Underutilized
Reason: Floodway.

Bldg. 2483
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010295
Status: Underutilized
Reason: Floodway.

Bldg. 2516
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010296
Status: Underutilized
Reason: Floodway.

Bldg. 2524
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010297
Status: Underutilized
Reason: Floodway.

Bldg. 2528
Laguna Shores Housing Area
Corpus Christi Co: Nueces TX 78419–
Landholding Agency: Navy
Property Number: 779010298
Status: Underutilized
Reason: Floodway.

Bldg. 2137, Aircraft Hangar
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210015
Status: Excess
Base closure—Number of Units: 1
Reason: Within 2000 ft. of flammable or explosive material.

Bldg. 1032, Warehouse
Naval Air Station, Chase Field
Beeville Co: Bee TX 78103–
Landholding Agency: Navy
Property Number: 779210016
Status: Excess
Base closure—Number of Units: 1
Reason: Other
Comment: Structural deterioration.

Bldg. 24
Olin E. Teague Veterans Center
1901 South 1st Street
Temple Co: Bell TX 76504–
Landholding Agency: VA
Property Number: 979010050
Status: Unutilized
Reason: Other
Comment: Friable asbestos.

Bldg. 25
Olin E. Teague Veterans Center
1901 South 1st Street
Temple Co: Bell TX 76504–
Landholding Agency: VA
Property Number: 979010051
Status: Unutilized
Reason: Other
Comment: Friable asbestos.

Bldg. 26
Olin E. Teague Veterans Center
1901 South 1st Street
Temple Co: Bell TX 76504–
Landholding Agency: VA
Property Number: 979010052
Status: Unutilized
Reason: Other
Comment: Friable asbestos.

Vermont

Depot Street
Downtown at the Waterfront
Burlington Co: Chittenden VT 05401–5226
Landholding Agency: DOT
Property Number: 879220003
Status: Excess
Reason: Floodway.

Virginia

Bldg. 052 & Tennis Court
USCG Reserve Training Center
Yorktown Co: York VA 23690–
Landholding Agency: DOT
Property Number: 879230004
Status: Excess
Reason: Secured area.

Damage Control Bldg.

Coast Guard, Group Eastern Shores
Chincoteague Co: Accomack VA 23361–510
Landholding Agency: DOT
Property Number: 879240013
Status: Unutilized
Reason: Secured area.

Admin. Bldg.
Coast Guard, Group Eastern Shores
Chincoteague Co: Accomack VA 23361–510
Landholding Agency: DOT
Property Number: 879240014
Status: Unutilized
Reason: Secured area.

Storage Bldg.
Coast Guard, Group Eastern Shores
Chincoteague Co: Accomack VA 23361–510
Landholding Agency: DOT
Property Number: 879240015
Status: Unutilized
Reason: Secured area.

Washington

Norin Residence
Point of Arches, Olympic National Park Co: Clallam WA
Landholding Agency: Interior
Property Number: 619240003
Status: Excess
Reason: Other
Comment: Extensive deterioration.

Bldg. 57
Naval Supply Center Puget Sound
Manchester Co: Kitsap WA 98353–
Landholding Agency: Navy
Property Number: 779010091
Status: Unutilized
Reason: Within 2000 ft. of flammable or explosive material; secured area.

Bldg. 47 (Report 1)
Naval Supply Center, Puget Sound
Manchester Co: Kitsap WA 98353–
Landholding Agency: Navy
Property Number: 779010230
Status: Unutilized
Reason: Secured Area.

West Virginia

Mary Conrad Roadside Park Bldg
Brownsville Road
Weston Co: Lewis WV 26452–9677
Landholding Agency: COE
Property Number: 319240012
Status: Underutilized
Reason: Floodway.

Wyoming

Bldg. 95
Medical Center
NW. of town at the end of Fort Road
Sheridan Co: Sheridan WY 82801–
Landholding Agency: VA
Property Number: 979110004
Status: Unutilized
Reason: Other
Comment: Sewage digester for disposal plant.

Bldg. 96
Medical Center
NW. of town at end of Fort Road
Sheridan Co: Sheridan WY 82801–
Landholding Agency: VA
Property Number: 979110005
Status: Unutilized
Reason: Other
Comment: Pump house for sewage disposal plant.

Structure 99
Medical Center
NW. of town at the end of Fort Road
Sheridan Co: Sheridan WY 82801–
Landholding Agency: VA
Property Number: 979110006
Status: Unutilized
Reason: Other
Comment: Mechanical screen for sewage disposal plant.

Structure 100
Medical Center
NW. of town at the end of Fort Road
Sheridan Co: Sheridan WY 82801–
Landholding Agency: VA
Property Number: 979110007
Status: Unutilized
Reason: Other
Comment: Dosing tank for sewage disposal plant.

Structure 101
Medical Center
NW. of town at the end of Fort Road
Sheridan Co: Sheridan WY 82801–
Landholding Agency: VA
Property Number: 979110008
Status: Unutilized
Reason: Other
Comment: Chlorination chamber for sewage disposal plant.

Land (by State)

California

Salton Sea Test Range
ElCentro Co: Imperial CA 93555–
Landholding Agency: Navy
Property Number: 779010068
Status: Excess
Reason: Secured Area.

DVA Medical Center
4951 Arroyo Road
Livermore Co: Alameda CA 94550–
Landholding Agency: VA
Property Number: 979010023
Status: Unutilized
Reason: Other
Comment: 750,000 gallon water reservoir.

Florida

Boca Chica Field
Naval Air Station
Key West Co: Monroe FL 23040–
Landholding Agency: Navy
Property Number: 779010097
Status: Unutilized
Reason: Floodway.

East Martello Battery #2
Naval Air Station
Key West Co: Monroe FL 33040–
Landholding Agency: Navy
Property Number: 779010275
Status: Excess
Reason: Within airport runway clear zone.

Wildlife Sanctuary, VAMC
10,000 Bay Pines Blvd.
Bay Pines Co: Pinellas FL 33504–
Landholding Agency: VA
Property Number: 979230004
Status: Underutilized
Reason: Other
Comment: Inaccessible.

Georgia

Naval Submarine Base
Grid G–5 to G–10 to Q–6 to P–2
Kings Bay Co: Camden GA 31547–
Landholding Agency: Navy
Property Number: 779010228
Status: Underutilized
Reason: Secured Area.

Indiana

Portion of Tract No. 1224
Salamonie Lake
Huntington Co: Huntington IN 46750–
Landholding Agency: COE
Property Number: 319310001
Status: Unutilized
Reason: Other
Comment: Landlocked.

Kentucky

Tract 4626
Barkley, Lake, Kentucky and Tennessee
Donaldon Creek Launching Area
Cadiz Co: Trigg KY 42211–
Location: 14 miles from US Highway 68.
Landholding Agency: COE
Property Number: 319010030
Status: Underutilized
Reason: Floodway.

Tract AA–2747
Wolf Creek Dam and Lake Cumberland
US HWY. 27 to Blue John Road
Burnside Co: Pulaski KY 42519–
Landholding Agency: COE
Property Number: 319010038
Status: Underutilized
Reason: Floodway.

Tract AA–2726
Wolf Creek Dam and Lake Cumberland
KY HWY. 80 to Route 769
Burnside Co: Pulaski KY 42519–
Landholding Agency: COE
Property Number: 319010039
Status: Underutilized
Reason: Floodway.

Tract 1358
Barkley Lake, Kentucky and Tennessee
Eddyville Recreation Area
Eddyville Co: Lyon KY 42038–
Location: US Highway 62 to state highway 93.
Landholding Agency: COE
Property Number: 319010043
Status: Excess
Reason: Floodway.

Red River Lake Project
Stanton Co: Powell KY 40380–
Location: Exit Mr. Parkway at the Stanton and Slade Interchange, then take SR Hand 15 north to SR 613.
Landholding Agency: COE
Property Number: 319011684
Status: Unutilized
Reason: Floodway.

Barren River Lock & Dam No. 1
Richardsville Co: Warren KY 42270–
Landholding Agency: COE
Property Number: 319120008
Status: Unutilized
Reason: Floodway.

Green River Lock & Dam No. 3
Rochester Co: Butler KY 42273–
Location: Off State Hwy. 369, which runs off of Western Ky. Parkway
Landholding Agency: COE
Property Number: 319120009
Status: Unutilized
Reason: Floodway.

Green River Lock & Dam No. 4
Woodbury Co: Butler KY 42288–

Location: Off State Hwy 403, which is off State Hwy 231
Landholding Agency: COE
Property Number: 319120014
Status: Underutilized
Reason: Floodway.

Green River Lock & Dam No. 5
Readville Co: Butler KY 42275–
Location: Off State Highway 185
Landholding Agency: COE
Property Number: 319120015
Status: Unutilized
Reason: Floodway.

Green River Lock & Dam No. 6
Brownsville Co: Edmonson KY 42210–
Location: Off State Highway 259
Landholding Agency: COE
Property Number: 319120016
Status: Underutilized
Reason: Floodway.

Vacant land west of locksite
Greenup Locks and Dam
5121 New Dam Road
Rural Co: Greenup KY 41144–
Landholding Agency: COE
Property Number: 319120017
Status: Unutilized
Reason: Floodway.

Tract 6404, Cave Run Lake
U.S. Hwy 460
Index Co: Morgan KY
Landholding Agency: COE
Property Number: 319240005
Status: Underutilized
Reason: Floodway.

Tract 6803, Cave Run Lake
State Road 1161
Pomp Co: Morgan KY
Landholding Agency: COE
Property Number: 319240006
Status: Underutilized
Reason: Floodway.

Louisiana

Land—3.4 acres
VA Medical Center
2501 Shreveport Highway
Alexandria Co: Rapides LA 71301–
Landholding Agency: VA
Property Number: 979010010
Status: Unutilized
Reason: Within 2000 ft. of flammable or explosive material.

Maryland

Tract 131R
Youghiogheny River Lake, Rt. 2, Box 100
Friendsville Co: Garrett MD
Landholding Agency: COE
Property Number: 319240007
Status: Underutilized
Reason: Floodway.

5,635 sq. ft. of Land
Solomon's Annex
Solomon's MD
Landholding Agency: Navy
Property Number: 779230001
Status: Excess
Reason: Other
Comment: Drainage Ditch.

Michigan

Middle Marker Facility
Ypsilanti Co: Washtenaw MI 48198–
Location: 549 ft. north of intersection of Coolidge and Bradley Ave. on East side of street
Landholding Agency: DOT
Property Number: 879120006
Status: Unutilized
Reason: Within airport runway clear zone.

Minnesota

Parcel G
Pine River
Cross Lake Co: Crow Wing MN 56442–
Location: 3 miles from city of Cross Lake between highways 6 and 371.
Landholding Agency: COE
Property Number: 319011037
Status: Excess
Reason: Other
Comment: Highway right of way.

VAMC
VA Medical Center
4801 8th Street No.
St. Cloud Co: Sterns MN 56303–
Landholding Agency: VA
Property Number: 979010049
Status: Underutilized
Reason: Within 2000 ft. of flammable or explosive material.

Mississippi

Parcel 1
Grenada Lake
Section 20
Grenada Co: Grenada MS 38901–0903
Landholding Agency: COE
Property Number: 319011018
Status: Underutilized
Reason: Within airport runway clear zone.

Missouri

Ditch 19, Item 2, Tract No. 230
St. Francis Basin Project
2½ miles west of Malden Co: Dunklin MO
Landholding Agency: COE
Property Number: 319130001
Status: Unutilized
Reason: Floodway.

Union Lake
Sec 7, Twshp 42 north, Ranger West
Beaufort Co: Franklin MO
Landholding Agency: COE
Property Number: 319240008
Status: Unutilized
Reason: Floodway.

New York

Tract 1
VA Medical Center
Bath Co: Steuben NY 14810–
Location: Exit 38 off New York State Route 17.
Landholding Agency: VA
Property Number: 979010011
Status: Unutilized
Reason: Secured Area.

Tract 2
VA Medical Center
Bath Co: Steuben NY 14810–
Location: Exit 38 off New York State Route 17.
Landholding Agency: VA
Property Number: 979010012
Status: Underutilized
Reason: Secured Area.

Tract 3
VA Medical Center
Bath Co: Steuben NY 14810–
Location: Exit 38 off New York State Route 17.
Landholding Agency: VA
Property Number: 979010013
Status: Underutilized
Reason: Secured Area.

Tract 4
VA Medical Center
Bath Co: Steuben NY 14810–
Location: Exit 38 off New York State Route 17.
Landholding Agency: VA
Property Number: 979010014
Status: Unutilized
Reason: Secured Area.

North Carolina

Land
Atlantic Intracoastal Waterway
(See County) Co: Corrituck NC
Location: Near old Coinjack Bridge.
Landholding Agency: COE
Property Number: 319011537
Status: Unutilized
Reason: Floodway.

Ohio

Ohio River
Pike Island Lock and Dam
RD #1, Box 33
Tiltonsville Co: Jefferson OH
Landholding Agency: COE
Property Number: 319011561
Status: Underutilized
Reason: Floodway.

Pennsylvania

Land
Raystown Lake
Huntingdon Co: Huntingdon PA
Location: Downstream of Raystown Lake.
Landholding Agency: COE
Property Number: 219040420
Status: Excess
Reason: Other
Comment: Property Landlocked.

Lock and Dam #7
Monongahela River
Greensboro Co: Greene PA
Location: Left hand side of entrance roadway to project.
Landholding Agency: COE
Property Number: 319011564
Status: Unutilized
Reason: Floodway.

Lock and Dam #3
Monongahela River
Elizabeth Co: Allegheny PA 15037–0455
Landholding Agency: COE
Property Number: 319240014
Status: Unutilized
Reason: Floodway.

Puerto Rico

119.3 acres
Culebra Island PR 00775–
Landholding Agency: Interior
Property Number: 619210001
Status: Excess
Reason: Floodway.

Destino Tract
Eastern Maneuver Area
Vieques PR 00765–
Landholding Agency: Navy
Property Number: 779240016
Status: Excess
Reason: Other
Comment: Inaccessible.

Punta Figueras—Naval Station

Ceiba PR 00735–
Landholding Agency: Navy
Property Number: 779240017
Status: Excess
Reason: Floodway.

Tennessee

McClure Bend
Cordell Hull Dam and Reservoir
Carthage Co: Smith TN 37030–
Location: Highway 85 to McClure Bend Road.
Landholding Agency: COE
Property Number: 219040412
Status: Underutilized
Reason: Floodway.

Brooks Bend
Cordell Hull Dam and Reservoir
Highway 85 to Brooks Bend Road
Gainesboro Co: Jackson TN 38562–
Location: Tracts 800, 802–806, 835–837, 900–902, 1000–1003, 1025
Landholding Agency: COE
Property Number: 219040413
Status: Underutilized
Reason: Floodway.

Cheatham Lock and Dam
Highway 12
Ashland City Co: Cheatham TN 37015–
Location: Tracts E–513, E–512–1 and E–512–2
Landholding Agency: COE
Property Number: 219040415
Status: Underutilized
Reason: Floodway.

Tract 6737
Blue Creek Recreation Area
Barkley Lake, Kentucky and Tennessee
Dover Co: Stewart TN 37058–
Location: U.S. Highway 79/TN Highway 761
Landholding Agency: COE
Property Number: 319011478
Status: Underutilized
Reason: Floodway.

Tracts 3102, 3105 and 3106
Brimstone Launching Area
Cordell Hull Lake and Dam Project
Gainesboro Co: Jackson TN 38562–
Location: Big Bottom Road
Landholding Agency: COE
Property Number: 319011479
Status: Excess
Reason: Floodway.

Tract 3507
Proctor Site
Cordell Hull Lake and Dam Project
Celina Co: Clay TN 38551–
Location: TN Highway 52
Landholding Agency: COE
Property Number: 319011480
Status: Unutilized
Reason: Floodway.

Tract 3721
Obey
Cordell Hull Lake and Dam Project
Celina Co: Clay TN 38551–
Location: TN Highway 53
Landholding Agency: COE
Property Number: 319011481
Status: Unutilized
Reason: Floodway.

Tracts 608, 609, 611 and 612
Sullivan Bend Launching Area
Cordell Hull Lake and Dam Project
Carthage Co: Smith TN 37030–
Location: Sullivan Bend Road
Landholding Agency: COE
Property Number: 319011482
Status: Underutilized
Reason: Floodway.

Tract 920
Indian Creek Camping Area
Cordell Hull Lake and Dam Project
Granville Co: Smith TN 38564–
Location: TN Highway 53
Landholding Agency: COE
Property Number: 319011483
Status: Underutilized
Reason: Floodway.

Tracts 1710, 1716 and 1703
Flynns Lick Launching Ramp
Cordell Hull Lake and Dam Project
Gainesboro Co: Jackson TN 38562–
Location: Whites Bend Road
Landholding Agency: COE
Property Number: 319011484
Status: Underutilized
Reason: Floodway.

Tract 1810
Wartrace Creek Launching Ramp
Cordell Hull Lake and Dam Project
Gainesboro Co: Jackson TN 38551–
Location: TN Highway 85
Landholding Agency: COE
Property Number: 319011485
Status: Underutilized
Reason: Floodway.

Tract 2524
Jennings Creek
Cordell Hull Lake and Dam Project
Gainesboro Co: Jackson TN 38562–
Location: TN Highway 85
Landholding Agency: COE
Property Number: 319011486
Status: Unutilized
Reason: Floodway.

Tracts 2905 and 2907
Webster
Cordell Hull Lake and Dam Project
Gainesboro Co: Jackson TN 38551–
Location: Big Bottom Road
Landholding Agency: COE
Property Number: 319011487
Status: Unutilized
Reason: Floodway.

Tracts 2200 and 2201
Gainesboro Airport
Cordell Hull Lake and Dam Project
Gainesboro Co: Jackson TN 38562–
Location: Big Bottom Road
Landholding Agency: COE
Property Number: 319011488
Status: Underutilized
Reason: Within airport runway clear zone; floodway.

Tracts 710C and 712C
Sullivan Island
Cordell Hull Lake and Dam Project
Carthage Co: Smith TN 37030–
Location: Sullivan Bend Road
Landholding Agency: COE
Property Number: 319011489
Status: Unutilized
Reason: Floodway.

Tract 2403, Hensley Creek
Cordell Hull Lake and Dam Project
Gainesboro Co: Jackson TN 38562–
Location: TN Highway 85
Landholding Agency: COE
Property Number: 319011490
Status: Unutilized
Reason: Floodway.

Tracts 2117C, 2118 and 2120
Cordell Hull Lake and Dam Project
Trace Creek
Gainesboro Co: Jackson TN 38562–
Location: Brooks Ferry Road
Landholding Agency: COE
Property Number: 319011491
Status: Unutilized
Reason: Floodway.

Tracts 424, 425 and 426
Cordell Hull Lake and Dam Project
Stone Bridge
Carthage Co: Smith TN 37030–
Location: Sullivan Bend Road
Landholding Agency: COE
Property Number: 319011492
Status: Unutilized
Reason: Floodway.

Tract 517
J. Percy Priest Dam and Reservoir
Suggs Creek Embayment
Nashville Co: Davidson TN 37214–
Location: Interstate 40 to S. Mount Juliet Road
Landholding Agency: COE
Property Number: 319011493
Status: Underutilized
Reason: Floodway.

Tract 1811
West Fork Launching Area
Smyrna Co: Rutherford TN 37167–
Location: Florence road near Enon Springs Road
Landholding Agency: COE
Property Number: 319011494
Status: Underutilized
Reason: Floodway.

Tract 1504
J. Perry Priest Dam and Reservoir
Lamon Hill Recreation Area
Smyrna Co: Rutherford TN 37167–
Location: Lamon Road
Landholding Agency: COE
Property Number: 319011495
Status: Underutilized
Reason: Floodway.

Tract 1500
J. Perry Priest Dam and Reservoir
Pools Knob Recreation
Smyrna Co: Rutherford TN 37167–
Location: Jones Mill Road
Landholding Agency: COE
Property Number: 319011496
Status: Underutilized
Reason: Floodway.

Tracts 245, 257, and 256
J. Perry Priest Dam and Reservoir
Cook Recreation Area
Nashville Co: Davidson TN 37214–
Location: 2.2 miles south of Interstate 40 near Saunders Ferry Pike
Landholding Agency: COE
Property Number: 319011497
Status: Underutilized
Reason: Floodway.

Tracts 107, 109 and 110
Cordell Hull Lake and Dam Project
Two Prong
Carthage Co: Smith TN 37030–
Location: US Highway 85
Landholding Agency: COE
Property Number: 319011498

Status: Unutilized
Reason: Floodway.

Tracts 2919 and 2929
Cordell Hull Lake and Dam Project
Sugar Creek
Gainesboro Co: Jackson TN 38562–
Location: Sugar Creek Road
Landholding Agency: COE
Property Number: 319011500
Status: Unutilized
Reason: Floodway.

Tracts 1218 and 1204
Cordell Hull Lake and Dam Project
Location: Granville—Alvin Yourk Road
Granville Co: Jackson TN 38564–
Landholding Agency: COE
Property Number: 319011501
Status: Unutilized
Reason: Floodway.

Tract 2100
Cordell Hull Lake and Dam Project
Galbreaths Branch
Gainesboro Co: Jackson TN 38562–
Location: TN Highway 53
Landholding Agency: COE
Property Number: 319011502
Status: Unutilized
Reason: Floodway.

Tract 104 et. al.
Cordell Hull Lake and Dam Project
Horshoe Bend Launching Area
Carthage Co: Smith TN 37030–
Location: Highway 70 N
Landholding Agency: COE
Property Number: 319011504
Status: Underutilized
Reason: Floodway.

Tracts 510, 511, 513 and 514
J. Percy Priest Dam and Reservoir Project
Lebanon Co: Wilson TN 37087–
Location: Vivrett Creek Launching Area, Alvin Sperry Road
Landholding Agency: COE
Property Number: 319120007
Status: Underutilized
Reason: Floodway.

Tract A–142, Old Hickory Beach
Old Hickory Blvd.
Old Hickory Co: Davidson TN 37138–
Landholding Agency: COE
Property Number: 319130008
Status: Underutilized
Reason: Floodway.

Texas

Land—40.50 acres
Bergstrom Air Force Base
East Highway 71
Austin Co: Travis TX 78743–5000
Landholding Agency: Air Force-BC
Property Number: 199310001
Status: Excess
Base closure—Number of Units: 1
Reason: Within airport runway clear zone
Comment: Scheduled to be vacated 09/30/93.

Land—46.27 acres
Bergstrom Air Force Base
East Highway 71
Austin Co: Travis TX 78743–5000
Landholding Agency: Air Force-BC
Property Number: 199310002
Status: Excess
Base closure—Number of Units: 1
Reason: Within airport runway clear zone
Comment: Scheduled to be vacated 09/30/93.

Tracts 104, 105–1, 105–2 & 118
Joe Pool Lake
(See County) Co: Dallas TX
Landholding Agency: COE
Property Number: 319010397
Status: Underutilized
Reason: Floodway.

Part of Tract 201–3
Joe Pool Lake
(See County) Co: Dallas TX
Landholding Agency: COE
Property Number: 319010398
Status: Underutilized
Reason: Floodway.

Part of Tract 323
Joe Pool Lake
(See County) Co: Dallas TX
Landholding Agency: COE
Property Number: 319010399
Status: Underutilized
Reason: Floodway.

Tract 702–3
Granger Lake
Route 1, Box 172
Granger Co: Williamson TX 76530–9801
Landholding Agency: COE
Property Number: 319010401
Status: Unutilized
Reason: Floodway.

Tract 706
Granger Lake
Route 1, Box 172
Granger Co: Williamson TX 76530–9801
Landholding Agency: COE
Property Number: 319010402
Status: Unutilized
Reason: Floodway.

Virginia

0.07 Acre, Dismal Swamp Canal
West of U.S. Rt. 17
Chesapeake VA
Landholding Agency: COE
Property Number: 319210012
Status: Unutilized
Reason: Other
Comment: Inaccessible.

Washington

Land (Report 2), 234 acres
Naval Supply Center, Puget Sound
Manchester Co: Kitsap WA 98353–
Landholding Agency: Navy
Property Number: 779010231
Status: Unutilized
Reason: Secured Area.

West Virginia

Ohio River
Pike Island Locks and Dam
Buffalo Creek
Wellsburg Co: Brooke WV
Landholding Agency: COE
Property Number: 319011529
Status: Unutilized
Reason: Floodway.

Morgantown Lock and Dam
Box 3 RD #2
Morgantown Co: Monongahelia WV 26505–
Landholding Agency: COE
Property Number: 319011530
Status: Unutilized
Reason: Floodway.

London Lock and Dam
Route 60 East
Rural Co: Kanawha WV 25126–
Location: 20 miles east of Charleston, W. Virginia.
Landholding Agency: COE
Property Number: 319011690
Status: Unutilized
Reason: Other
Comment: .03 acres; very narrow strip of land located too close to busy highway.

[FR Doc. 93–3831 Filed 2–18–93; 8:45 am]
BILLING CODE 4310–20–M

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Indian Gaming

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice of approved Tribal-State Compact.

SUMMARY: Pursuant to 25 U.S.C. 2710, of the Indian Gaming Regulatory Act of 1988 (Pub. L. 100–497), the Secretary of the Interior shall publish, in the **Federal Register**, notice of approved Tribal-State Compacts for the purpose of engaging in Class III (casino) gambling on Indian reservations. The Assistant Secretary—Indian Affairs, Department of the Interior, through his delegated authority, has approved the Tribal-State Compact for Class III Gaming Between the Lower Elwha Klallam Tribe and the State of Washington, enacted on December 21, 1992.

DATES: This action is effective on February 19, 1993.

FOR FURTHER INFORMATION CONTACT: Hilda Manuel, Interim Staff Director, Indian Gaming Management Staff, Bureau of Indian Affairs, Washington, DC 20240; (202) 219–4068.

Dated: February 11, 1993.

Stan Speaks,

Acting Assistant Secretary, Indian Affairs.

[FR Doc. 93–3867 Filed 2–18–93; 8:45 am]
BILLING CODE 4310–02–M

Bureau of Land Management

[OR–110–6310–11–257A; G2–099]

Termination of Recreation and Public Purposes Act Classification; Oregon

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Termination of Recreation and Public Purposes Act Classification (ORE 017524); Oregon.

SUMMARY: This notice announces termination of Recreation and Public Purposes Act Classification (ORE 017524); Oregon.

FOR FURTHER INFORMATION CONTACT: Ann Ramage, Acting Grants Pass Area

Manager, Medford District Office, 3040 Biddle Road, Medford, Oregon 97504; Telephone 503–770–2200.

SUPPLEMENTARY INFORMATION: The Oregon State Director, Bureau of Land Management, classified pursuant to section 7 of the Act of June 28, 1934 (48 Stat. 1272), the following lands as suitable for recreation and public purposes.

T. 36 S., R. 5 W.,
Section 7, SW1/4SW1/4,
Willamette Meridian, Josephine County, Oregon (ORE 017524).

This parcel was leased to the City of Grants Pass, Oregon in 1966 under the Recreation and Public Purposes Act to be utilized as a city park. The park was never developed as proposed and the lease subsequently expired on October 4, 1991.

Since the lease has expired and since the land is no longer needed for recreational and public purposes, the classification is hereby terminated in its entirety.

Dated: February 9, 1993.

David A. Jones,

District Manager.

[FR Doc. 93–3924 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–33–M

[MT–020–93–4120–03; MTM 80697]

Application for Lease of Federal Coal Deposits Within the Powder River Coal Production Region, MT

AGENCY: Bureau of Land Management, Department of the Interior, Miles City District, Montana.

ACTION: Notice of intent to prepare an Environmental Impact Statement on the proposed potential coal lease tracts, Western Energy's Coal Lease Application, MTM 80697.

SUMMARY: On January 29, 1992, Western Energy Coal Company filed a coal lease application, MTM 80697, for federal coal resources with the Powder River Coal Production Region.

The coal lands included in this application are located in Rosebud County, Montana, and are described as follows:

T. 1 N., R. 39 E., P.M.M.
Sec. 2: S½NW¼, N½NE¼SE¼
T. 1 N., R. 40 E., P.M.M.
Sec. 6: Lots 1, 2, 3, 4, S½N½, S½
Sec. 8: E½, N½NW¼
Sec. 14: S½SW¼, SE¼
T. 2 N., R. 40 E., P.M.M.
Sec. 32: All

The 2,061.0 acre tracts contain an estimated 39.3 million tons of recoverable coal reserves.

The initial public scoping period was from June 11, 1992, through August 1, 1992. Three public meetings were held in Colstrip, Hardin, and Lame Deer, Montana. Because of the lack of public participation, the scoping period was extended through August 28, 1992, and two additional public meetings were held in Lame Deer and Colstrip, Montana.

Concerns and issues expressed by the public centered on social, economic, and cultural impacts to the Northern Cheyenne and Crow Tribes, hydrologic impacts to the area and the need to do an Environmental Impact Statement (EIS) as the appropriate level of environmental documentation for the project.

Two alternatives being considered for the EIS are the proposed action which addresses the leasing and mining of these federal coal lands and the no action which addresses denial of the lease application and no mining of these federal coal lands.

FOR FURTHER INFORMATION CONTACT: All comments and requests for additional information should be addressed to Bill Matthews, Project Manager, Bureau of Land Management, Powder River Resource Area, Miles City Plaza, Miles City, Montana 59301, telephone number (406) 232–7000.

Donald E. Nelson,

Acting District Manager.

[FR Doc. 93–3923 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–DN–M

[AZ–931–4333–02–2600]

Intent to Prepare a Legislative Environmental Impact Statement for Suitability/Nonsuitability Recommendations for Inclusion of Arizona Rivers in the National Wild and Scenic Rivers System; Arizona State Office, Phoenix, AZ

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Intent to Prepare a Legislative Environmental Impact Statement.

SUMMARY: The Bureau of Land Management in Arizona is preparing a Legislative Environmental Impact Statement for suitability recommendations for inclusion of Arizona Rivers in the National Wild and Scenic Rivers System. This Legislative Environmental Impact Statement complies with Public Laws 90–542 (Wild and Scenic Rivers Act), 91–190 (National Environmental Policy Act), and 94–579 (Federal Land Policy and Management Act).

Management actions proposed in the Legislative Environmental Impact Statement include recommending suitability determinations or other appropriate alternatives including nonsuitability (no action) for approximately 17 to 20 river segments associated with lands administered by the Arizona BLM.

DATES: Comments related to the identification of issues will be accepted until March 22, 1993.

ADDRESSES: Send comments to Bureau of Land Management, Arizona State Office, 3707 North 7th Street, P.O. Box 16563, Phoenix, Arizona 85011, Attention: Wild and Scenic River Project Manager (931).

FOR INFORMATION CONTACT: Wild and Scenic Rivers Project Manager, Arizona State Office, Phoenix, Arizona. Telephone 602–640–5509.

SUPPLEMENTARY INFORMATION: The Legislative Environmental Impact Statement will identify a proposed action, a no action, and other appropriate alternatives for each river segment identified as eligible and classified as wild, scenic or recreational in Resource Management Plans or Resource Management Plan Amendments prepared in accord with the Bureau Planning System.

An analysis of specific direct and indirect impacts, and cumulative impacts of the identified alternatives will be documented in the Legislative Environmental Impact Statement.

Public scoping meetings will be held in the Resource Areas and Districts that have management responsibilities over lands associated with the subject river segments. The times and places of the meetings, which will be held in March and April 1993 will be announced in local media.

A draft Legislative Environmental Impact Statement will be issued for a 60-day public review and comment period.

Complete records of the environmental analysis process will be available for public review at the Arizona State Office, 3707 North 7th Street, and for specific river segments in the appropriate BLM Resource or District Office. These are located in St. George, Utah; Safford, Arizona; Yuma, Arizona; and Phoenix, Arizona.

Bruce Conrad,

Associate State Director.

[FR Doc. 93–3921 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–84–P

[MT-060-03-4191-03]

Draft Royal East Joint Venture Exploration Project Environmental Impact Statement; Availability

AGENCY: Department of the Interior, Bureau of Land Management.

ACTION: Notice of availability of the Draft Royal East Joint Venture Exploration Project Environmental Impact Statement.

SUMMARY: In accordance with section 202 of the National Environmental Policy Act of 1969, a draft environmental impact statement (EIS) has been prepared on the impact of a proposal by Manhattan Minerals (US) Ltd. to perform hardrock mineral exploration work on East Butte, in the Sweet Grass Hills, Liberty County, Montana. The EIS analyzes the environmental consequences of three management alternatives: The proposed action and preferred alternative, a modified proposed action and a no action alternative.

PUBLIC PARTICIPATION: A copy of the EIS will be available at the Liberty County Library in Chester, Montana. In addition, copies will be available from the Lewistown District Office, Airport Road, P.O. Box 1160, Lewistown, Montana 59457; phone (406) 538-7461. Public reading copies will be available for review at the following BLM locations:

Office of External Affairs, Main Interior Building, room 5600, 18th and C Streets, NW, Washington, DC 20240

External Affairs Office, Montana State Office, 222 North 32nd Street, Billings, MT 59107

Lewistown District Office, Airport Road, P.O. Box 1160, Lewistown, MT 59457-1160

Great Falls Resource Area, 812 14 Street North, Great Falls, MT 59403

Written comments on the draft EIS will be accepted for 60 days following the date the Environmental Protection Agency publishes the Notice of Filing of the draft in the **Federal Register**. Comments can also be presented at these public meetings:

Date	City	Time	Location
March 16, 1993	Chester, MT	7:00 p.m	Chester High School.
March 17, 1993	Browning, MT	6:00 p.m	Blackfeet Tribal Conference Room.
March 18, 1993	Rocky Boy, MT	3:30 p.m	Stone Child College.

ADDRESSES: Comments should be sent to the District Manager, Bureau of Land Management, P.O. Box 1160, Lewistown, MT 59457-1160.

FOR FURTHER INFORMATION CONTACT: Richard Hopkins, Area Manager, Great Falls Resource Area, 812 14 St., N., Great Falls, MT 50403, 406-727-0503.

SUPPLEMENTARY INFORMATION: Manhattan Minerals (US) Ltd. has submitted to the Lewistown District Office, Bureau of Land Management and the Montana Department of State Lands, a proposal to perform hardrock mineral exploration work on East Butte in the Sweet Grass Hills. Manhattan Minerals (US) Ltd. is proposing to build approximately 28,000 feet of access road in the Tootsie Creek area on East Butte. Once constructed, the access road would serve as location for approximately 38 inroad drill sites as well as for exploration trenches.

Dated: February 10, 1993.

David L. Mari,

District Manager.

[FR Doc. 93-3925 Filed 2-18-93; 8:45 am]

BILLING CODE 4310-DN-M

[CO-010-03-4320-01]

Craig Colorado Advisory Council Meeting

Time and Date: 9 a.m., April 7, 1993.

Place: Craig District Office, 455 Emerson, Street, Craig, Colorado 81625.

Status: Open to public; interested persons may make oral statements at 9:30 a.m. Summary minutes of the meeting will be maintained in the Craig District Office.

Matters To Be Considered

1. Grazing Fee Initiative.
2. Ecosystem Management.
3. Proposed Wilderness Designations in the Craig District.
4. Other Updates—Coal royalty resolution; Yampa River Wild and Scenic Study; Black-footed ferret reintroduction.
5. Current Status of Council Resolutions.
6. Field Trip to Axial Basin.

Contact Person for More Information: Mary Pressley, Craig District Office, 455 Emerson Street, Craig, Colorado 81625-1129, *Phone:* (303) 824-8261.

Dated: February 3, 1993.

Robert W. Schneider,

Associate District Manager.

[FR Doc. 93-3943 Filed 2-18-93; 8:45 am]

BILLING CODE 4310-JB-M

[NM-030-4320-01]

Las Cruces District Grazing Advisory Board; Meeting

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of meeting.

SUMMARY: The meeting will be held at the Las Cruces District Office, Bureau of Land Management, 1800 Marquess, Las Cruces, New Mexico 88005. The agenda is:

10 a.m. Meeting called to order
10:05 a.m. Election of new officers
10:30 a.m. Approval of minutes
10:45 a.m. General discussion
11 a.m. Public comment period
12 noon Break for lunch
1 p.m. Update on the Range Improvement Program
1:15 p.m. Presentation of new projects
3 p.m. Meeting adjourned

MEETING DATE: April 6, 1993, beginning at 10 a.m.

FOR FURTHER INFORMATION CONTACT: Jim McCormick, District Range Specialist, Bureau of Land Management, 1800 Marquess, Las Cruces, New Mexico or at (505) 525-4366.

Dated: February 10, 1993.

Linda S.C. Rundell,

District Manager.

[FR Doc. 93-3926 Filed 2-18-93; 8:45 am]

BILLING CODE 4310-FB-M

[CA-010-4212-05; CACA 31354]

Realty Action; Recreation and Public Purposes (R&PP) Act Classification; California

AGENCY: Bureau of Land Management, Interior.

ACTION: Initiation of a 45 day public comment period on the proposed classification of public lands for recreation and public purpose.

SUMMARY: Pursuant to the authority in the Recreation and Public Purposes Act, as amended (43 U.S.C. 869 *et seq.*) a 45 day public comment period is initiated on the following land proposed to be classified as suitable for lease and sale to the State of California, Yosemite High School District and Coarsegold Elementary School District, Madera County, California.

Mount Diablo Meridian

T. 8 S., R. 21 E.,
Sec. 32: MS 6929
Sec. 33: MS 6929
Sec. 33: MS 2251
Containing 80 acres more or less.

SUPPLEMENTARY INFORMATION: The lands are not needed for Federal purposes. Lease or conveyance is consistent with current BLM land use planning and would be in the public interest.

Upon publication of this notice in the **Federal Register**, the lands will be segregated from all other forms of appropriation under the public land laws, including the general mining laws, except for lease or conveyance under the Recreation and Public Purposes Act and leasing under the mineral leasing laws. It has been requested that the Mineral Survey be removed and a Supplemental Plat survey be prepared for the purpose of lotting the above described Federal Land.

For a period of 45 days from the date of publication of this notice, interested persons may submit comments regarding the proposed or classification of the lands to the District Manager, c/o Area Manager, Hollister Resource Area, 20 Hamilton Court, Hollister, CA 95023. Any adverse comments will be reviewed by the State Director. In the absence of any adverse comments the classification will become effective 60 days from the date of publication of this notice.

Dated: February 11, 1993.

Robert E. Beehler,

Area Manager.

[FR Doc. 93–3927 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–[illegible]–M

[ID–060–03–4210–04; IDI–27240]

Realty Action; Exchange of Public and Private Lands in Bonner, Shoshone, and Kootenai Counties, ID

AGENCY: Bureau of Land Management, Interior

ACTION: Notice of realty action; exchange of public lands in Bonner, Shoshone, and Kootenai Counties, Idaho.

SUMMARY: This notice is to advise the public that the Emerald Empire Resource Area, Coeur d'Alene District of the Bureau of Land Management has determined that the following described public lands are suitable for disposal by exchange under section 206 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1716:

Boise Meridian

T.48N., R.1W.,
Sec. 6, lots 2,3
T.49N., R.1W.,
Sec. 31, lots 1,2, NW¼NE¼, W½SW¼
T.56N., R.1W.,
Sec. 6, lots 4,5, SE¼NW¼
The area described above contains approximately 381.53 acres.

In exchange for these lands, the United States will acquire the following described lands from Idaho Forest Industries, Inc.:

Boise Meridian

T.47N., R.1E.,
Sec. 13, SW¼NE¼, S½NW¼
Sec. 14, SE¼NE¼
Sec. 26, NW¼, W½SW¼, SE¼SW¼
Sec. 27, E½E½, SW¼NE¼, W½SE¼
Sec. 35, NE¼NW¼
T.47N., R.2E.,
Sec. 5, lot 1, SE¼NE¼
T.48N., R.2E.,
Sec. 32, S½SE¼SE¼
Sec. 33, SW¼SW¼
The area described above contains approximately 894.21 acres.

The purpose of the land exchange is to benefit the public interest by obtaining important resource values. The public lands to be exchanged are isolated and difficult to manage parcels with limited resource values. The private lands being offered have important values for access, wildlife, and recreation that merit acquisition for public ownership. There are no grazing leases, grazing permits, or range improvements on any of the above described public lands. The exchange is consistent with the Bureau of Land Management land use plans and the public interest will be served by completing this exchange. Final determination on disposal will await completion of an environmental analysis, which will be made available to the public. The value of the lands to be exchanged will be approximately equal.

Lands to be transferred from the United States will be subject to the following reservations, terms, and conditions:

1. All valid existing rights, including any right-of-way, easement, permit or lease of record.

2. A reservation to the United States of a right-of-way for ditches and canals constructed by the authority of the United States under the Act of August 30, 1890 (43 U.S.C. 945).

The publication of this notice in the **Federal Register** will segregate the public lands described above to the extent that they will not be subject to appropriation under the public land laws, including the mining laws but not from exchange pursuant to section 206 of the Federal Land Policy and Management Act of 1976. As provided by the regulations of 43 CFR 2201.1(b), any subsequently tendered application, allowance of which is discretionary, shall not be accepted, shall not be considered as filed and shall be returned to the applicant. The segregative effect of this notice will terminate upon issuance of patent or in two years, whichever occurs first.

ADDRESSES: Detailed information concerning the exchange is available for review at the Coeur d'Alene District Office, 1808 North Third Street, Coeur d'Alene, Idaho 83814

SUPPLEMENTARY INFORMATION: For a period of 45 days from the date of publication of this notice in the **Federal Register**, interested parties may submit comments to the District Manager at the above address. Objections will be reviewed by the State Director who may sustain, vacate, or modify this realty action. In the absence of any objections, this realty action will become the final determination of the Department of the Interior.

Dated: February 9, 1993.

Fritz U. Rennebaum,

District Manager.

[FR Doc. 93–3931 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–[illegible]–M

[NV–930–03–4210–04; Nv 50964]

Realty Action; Exchange of Public and Private Lands, Lyon County, Nevada

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Realty Action, Proposed Land Exchange NV 50964.

SUMMARY: The following described federal land in Lyon County, Nevada, has been proposed for disposal by exchange under section 206 of the Federal Land Policy and Management Act of October 21, 1976 (43 U.S.C. 1716):

Mount Diablo Meridian (MDM), Nevada

T. 11 N., R. 26 E.

Sec. 4: Lots 1, 8, and 10;
Sec. 5: N½S½NW¼;
Sec. 9: Lots 1, 3, 8, 10, and 16;
Sec. 10: S½NW¼SW¼NW¼, SW¼SW¼NW¼, W½SE¼SW¼;

T. 12 N., R. 26 E.

Sec. 30: SW¼NE¼SW, S½N½SW¼SE¼, S½SW¼SE¼;
Sec. 32: S½NE¼NE¼, NE¼NW¼;
Sec. 33: SW¼NW¼NW¼, SW¼NW¼, W½SW¼SE¼NW¼, NE¼SW¼, W½SW¼SE¼, W½SE¼SW¼SE¼;

aggregating approximately 598.49 acres.

In exchange, the United States would acquire the following described private land in Lyon County, Nevada:

T. 11 N., R. 26 E., MDM

Sec. 14: NW¼SW¼;
Sec. 15: N½SE¼;

aggregating approximately 120 acres.

SUPPLEMENTARY INFORMATION: The purpose of this exchange is to acquire private land adjacent to public land on both sides of the East Walker River which is characterized by high public resource values of scenery, wildlife habitat, and outdoor recreation. The federal land to be exchanged comprises several semi-arid desert parcels adjacent to private lands owned by Pitchfork Ranch, Inc. The exchange would be consistent with provisions of the Walker Resource Management Plan and would serve the public interest. An environmental assessment will be prepared.

The proposed exchange would be based on equal land values determined by fair market value appraisals. Acreages of either the private land or the public land would be reduced as needed to equalize values.

Land transferred from Federal ownership would be subject to the following reservations and rights-of-way:

1. A reservation of right-of-way to the United States of ditches and canals, pursuant to the Act of August 30, 1890 (43 U.S.C. 945);

2. Powerline Right-of-Way NEV 044376, 100 feet wide, granted by the United States to Sierra Pacific Power Company, its successors or assigns, under the authority of the Act of March 4, 1911 (36 Stat. 1253; 43 U.S.C. 96);

3. Powerline Right-of-Way NEV 061404, 40 feet wide, granted by the United States to Sierra Pacific Power Company, its successors or assigns, under the authority of the Act of March 4, 1911 (36 Stat. 1253; 43 U.S.C. 96); and

4. Buried telephone line Right-of-Way N 48789, six feet wide, granted by the United States to Contel of Nevada, its successors or assigns, under the authority of the Act of October 21, 1976 (90 Stat. 2776; U.S.C. 1761).

Publication of this notice in the **Federal Register** segregates the public lands from appropriation under the public land laws, including the mining laws, until the first of the following events occurs (1) issuance of patent as proposed, or (2) the expiration of two years from the date this notice is published in the **Federal Register** or (3) publication of a notice in the **Federal Register** that the segregation is terminated.

FOR FURTHER INFORMATION CONTACT: More detailed information is available from the Area Manager or Steep Weiss, Bureau of Land Management, Walker Resource Area, 1535 Hot Springs Road, suite 300, Carson City, Nevada 89706; telephone (702) 885–6000.

DATES: Interested parties may submit comments, including issues and alternatives to be analyzed in an environmental assessment, to the Area Manager at the address above by April 5, 1993.

Dated: February 8, 1993.

John Matthiessen,

Area Manager.

[FR Doc. 93–3836 Filed 2–18–93; 8:45 am]

BILLING CODE 4310-HC-M

[OR–110–6310–11–257A; G2–098]

February 9, 1993.

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Termination of Recreation and Public Purposes Act Classification (ORE 015650); Oregon.

SUMMARY: This notice announces termination of Recreation and Public Purposes Act Classification (ORE 015650); Oregon.

FOR FURTHER INFORMATION CONTACT: Ann Ramage, Acting Grants Pass Area Manager, Medford District Office, 3040 Biddle Road, Medford, Oregon 97504; Telephone 503–770–2200.

SUPPLEMENTARY INFORMATION: The Oregon State Director, Bureau of Land Management, classified pursuant to section 7 of the Act of June 28, 1934 (48 Stat. 1272), the following lands as suitable for recreation and public purposes:

T. 36 S., R. 6 W., Section 27, SW¼ SE¼, Willamette Meridian, Josephine County, Oregon (ORE 015650).

The lands were originally used as the location of the Fort Vannoy Job Corps Center and were later leased to Josephine County under the Recreation and Public Purposes Act for use as a community college. Through Public Law 101–419 of October 12, 1990 the lands were conveyed to Josephine County. Subsequently the Recreation and Public Purposes Act lease was terminated.

Since the lease has been terminated and since the land is no longer needed for recreational and public purposes, the classification is hereby terminated in its entirety.

David A. Jones,

District Manager.

[FR Doc. 93–3922 Filed 2–18–93; 8:45 am]

BILLING CODE 4310-33-M

[OR–110–4212–13; G–3–112]

Realty Action; Exchange of Public and Private Lands in Jackson County, OR

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of realty action.

Pursuant to section 206 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1716), the Bureau of Land Management, Ashland Resource Area, is considering the following described land in Jackson County as suitable for exchange.

Selected Public Land

Willamette Meridian, Oregon

T. 37 S., R. 2 E.
Sec. 5, all;
Sec. 7, Lots 3, 4, NE¼NE¼, S½NE¼, SE¼NW¼, E½SW¼, SE¼;
Sec. 18, Lot 1, NE¼NE¼, NE¼NW¼;

Aggregating approximately 1,240 acres, more or less.

Offered Private Land

Willamette Meridian, Oregon

T. 40 S., R. 4 E.
Sec. 21, E½SW¼, W½SE¼, SE¼SE¼;
Sec. 22, W½W½;
Sec. 27, W½W½;
Sec. 28, all;
Sec. 33, NE¼NW¼;

Aggregating approximately 1,200.00 acres, more or less.

FOR FURTHER INFORMATION AND PUBLIC COMMENT: The Environmental Assessment and other information concerning this exchange is available for review at the Medford District Office, 3040 Biddle Road, Medford, Oregon 97504. For a period of 45 days from the date of this notice, interested parties may submit comments to the District Manager at the above address. Any adverse comments will be evaluated by the State Director, who may sustain, vacate, or modify this Realty Action.

SUPPLEMENTARY INFORMATION: The purpose of this exchange is to facilitate resource management opportunities. The private lands being offered have important values for timber management, wildlife habitat, recreation, and livestock grazing.

The exchange will be completed on an equal value basis. Full equalization of values will be achieved through acreage adjustment or by cash payment of an amount not to exceed 25 percent of the lands being transferred out of Federal ownership.

The following reservations will be made in a patent issued for the public lands:

1. A reservation to the United States of a right-of-way of ditches or canals

constructed by the authority of the United States, Act of August 30, 1890 (43 U.S.C. 945).

2. A reservation to the United States for existing roads.

3. A reservation of a conservation easement to include a bat cave in Section 7.

4. All other valid, existing rights, including but not limited to any right-of-way, easement, or Lease of Record.

Publication of this notice in the **Federal Register** segregates the public lands from operation of the public land laws and the mining law, except for mineral leasing and exchange under section 206 of FLPMA. For a period of two years from the date of publication of this notice in the **Federal Register**, the land will be segregated as specified above unless the application is denied, canceled, or the exchange is approved prior to that date.

Dated: February 9, 1993.

David A. Jones,

District Manager.

[FR Doc. 93–3932 Filed 2–18–93; 8:45 am]

BILLING CODE 4310-55-M

[CO–030–06–4410–02]

Record of Decision, Approved Resource Management Plan, and Rangeland Program Summary for the Gunnison Resource Area, CO

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of availability of Record of Decision, Approved Resource Management Plan, and Rangeland Program Summary for the Gunnison Resource Area.

SUMMARY: In accordance with the National Environmental Policy Act of 1969 (40 CFR 1550.2), and the Federal Land Policy and Management Act of 1976, the Department of Interior, Bureau of Land Management (BLM), Montrose District provides notice of the Record of Decision, Approved Resource Management Plan, and Rangeland Program Summary (ROD/RMP) for the Gunnison Resource Area. This document is now available to the public. This ROD/RMP supersedes the existing land use plan and other related documents for managing BLM-administered lands. Located in south-central Colorado, the Gunnison Resource Area (GRA) encompasses 585,012 acres of federal surface estate and a total of 728,567 acres of federal subsurface mineral estate within Gunnison, Hinsdale, Montrose, Saguache, and Ouray Counties.

DATES: February 5, 1993.

ADDRESSES: Copies of the ROD/RMP are available upon request by writing Gunnison RMP Project, Bureau of Land Management, 2465 Townsend Avenue, Montrose, Colorado 81401. The phone number is (303) 249–7791 (Ext. 232). Copies may also be obtained from the Gunnison Resource Area Office, 216 N. Colorado, Gunnison, Colorado 81230. The Gunnison office phone number is (303) 641–0471.

FOR FURTHER INFORMATION CONTACT: Bill Bottomly, RMP Project Manager, Montrose, Colorado. His phone number is (303) 249–6047.

SUPPLEMENTARY INFORMATION: The Gunnison ROD/RMP is essentially the same as the Gunnison Proposed RMP and Final EIS (PRMP). No changes to the proposed decisions have been made. However, some clarifying language has been included as a result of three protests the BLM received on the PRMP. The clarifying language concerned livestock grazing guidelines in riparian areas, sheep grazing in the Silver creek drainage, and the use of the term "biological year" as it pertains to elk management in the planning area. In addition, total, active, and suspended preference for livestock grazing, expressed in animal unit months (AUMs), has been updated for publication in this RMP to more accurately portray the current livestock grazing program. To update this information, consideration was given to agreements or decisions made prior to the completion of this RMP, loss of federal ownership, allotments being combined or separated, and the transfer of administration of some allotments to the adjacent San Juan Resource Area.

Four alternatives that encompass a spectrum of realistic management options were considered in the planning process. The final plan is a mixture of management objectives and actions that, in the opinion of BLM, best resolves the issues and concerns that drove the preparation of the plan. Major aspects of the plan include the following:

Minerals

The vast majority of land is open to fluid mineral leasing under standard lease terms, to locatable mineral entry, and to sale of mineral materials. protective actions such as seasonal restrictions, no surface occupancy, or withdrawal have been prescribed to protect important wildlife, recreation, and natural resources.

Soil and Water Resources

Reducing soil erosion and increasing plan basal cover on soils with moderate to severe erosion potential are high priorities.

Vegetation

The identification of desired plant communities will be made that best meet the total resource objectives and needs for a given piece of public land.

Riparian

Riparian areas are to be properly functioning. To meet this objective, restrictions or conditions to uses have been made such as limitations on timber harvesting and off-road vehicle restrictions. The use of stubble heights have been incorporated to help direct proper livestock utilization in riparian areas.

Wildlife Habitat

Measures will be taken to protect or enhance wildlife habitat for deer, elk, bighorn sheep, antelope, sage grouse, and other species. BLM will continue to participate in the Colorado Habitat Partnership Program which is designed to help mitigate conflicts between livestock and wildlife forage utilization.

Special Plants and Animals

Habitat that supports existing populations would be maintained and protected.

Livestock Management

About 470,460 acres of public land suitable for grazing would be available for grazing. Utilization levels of livestock, including minimum stubble height requirements, are identified to meet vegetation and watershed goals in riparian and upland areas..

Forest Management

About 41,347 acres of suitable commercial forest lands and 23,615 acres of woodlands would be available for harvest. Restrictions on timber harvesting would be employed to protect riparian areas, soils, crucial wildlife habitat and elk calving areas, and other valuable resources.

Transportation and Access

New access would be pursued into eleven areas.

Land Tenure

A total of 43 tracts containing 3,120 acres would be available for disposal by sale. The balance of the area would be retained but can be considered for exchange, boundary adjustment, state indemnity selection, Recreation and Public Purpose applications or other appropriate authority if disposal serves the public interest. Acquisition in the unit can be considered on a case-by-case basis.

Rights-of-Way

About 448,219 acres would be open for right-of-way consideration. About 85,387 acres would be avoidance areas and 51,406 acres would be exclusion areas to rights-of-ways. A right-of-way corridor is designated that parallels the existing 230 Kv transmission line from Curecanti to Salida. A second right-of-way corridor is designated that parallels the existing 115 Kv transmission line from Blue Mesa Reservoir to Lake City.

Fire Management

Wildfires on most of the area would be conditionally suppressed. Wildfires on about 76,624 acres would be under a full suppression policy.

Recreation

Three (3) areas are designated as Special Recreation Management Areas (SRMAs) where most recreation management will be focused:

- Alpine Triangle SRMA: Encompasses land along the Lake Fork of the Gunnison River south of Blue Mesa Reservoir and lands south and west of Lake City. The area has valuable fisheries, historical features, riparian, natural and scenic values.
- Powderhorn Primitive Area SRMA: The area has valuable natural and scenic values in a non-motorized setting.
- Cochetopa Canyon SRMA: This riparian corridor has valuable scenic and river-related values.

Off-Highway Vehicles (OHV)

About 49,000 acres of the resource area (including the Powderhorn Primitive Area SRMA) will be closed to OHV use; 173,000 acres will be limited to OHV use; the remaining public lands will be open to OHV use.

Wild and Scenic Rivers

Pursuant to the Wild and Scenic Rivers Act, the plan analyzed 131 creek/river segments for potential designation as wild and scenic rivers. One segment of the Lake Fork of the Gunnison River (13.3 miles) met eligibility criteria, was given a potential classification as "recreational," and was analyzed for suitability for inclusion into the Wild and Scenic Rivers System. This segment was not determined suitable for inclusion into the system.

Wilderness Study Areas

Six (6) Wilderness Study Areas encompassing approximately 114,247 acres will be managed according to interim policy and guidelines until Congress acts upon them.

Areas of Critical Environmental Concern (ACEC)

The plan designates six (6) areas of BLM-administered lands (42,261 acres) as Areas of Critical Environmental Concern (ACEC):

- American Basin: 1,595 acres, located in all or part of T.42N., R.6W., Sections 3, 4, 9, 10, 15, and 16, and T.43N., R.6W., Sections 33 and 34; to protect visual and related recreation opportunities.
- Redcloud Peak: 5,947 acres, located in all or part of T.43N., R5W., Sections 20–23, 38–29, and 32–35; to protect and enhance the Uncompahgre fritillary butterfly and related habitat. The butterfly has been listed as an endangered species by the U.S. Fish and Wildlife Service.
- Slumgullion Earthflow National Landmark: 1,407 acres, located in all or part of T.43N., R.4W., Sections 1 and 10–15; to protect visual and natural values.
- West Antelope Creek: 28,215 acres, located in all or part of T.49N., R.1W., Sections 2–10; T.50N., R.1W., Sections 13, 14, 21–28, and 31–35, T.49N., R.2W., Sections 1–24 and 30; T.50N., R.2W., Sections 12–14, 23–26, and 35 and 36; T.49N., R.3W., Sections 1–26; and T.49N., R.4W., Sections 13, 14, 23, and 24; to protect and enhance wintering big game and related habitat.
- South Beaver Creek: 4,565 acres, located in part or all of T.48N., R.1W., Sections 2–5, 9–11, and 13–15; and T.49N., R.1W., Sections 16, 20–22, 27–29, and 32–34; to protect and enhance populations of skiff milkvetch, a special status species.
- Dillon Pinnacles: 532 acres, located in part or all of T.49N., R.4W.; to protect and enhance scenic and recreational opportunities. Special management will be provided to minimize surface disturbing activities (e.g., motorized vehicle limitations, mineral development restrictions, etc.) that would adversely affect the significant values within these six areas. Coordinated resource management activity plans will be prepared to detail these protective measures.

Dated: February 12, 1993.

Gary McVicker,

Acting State Director.

[FR Doc. 93–3928 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–JB–M

[AZ–050–03–4210–01; 1614]

Intent To Prepare a Resource Management Plan Amendment and Public Invitation To Participate in the Identification of Issues and Planning Criteria, Yuma District, AZ

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of intent.

SUMMARY: The Bureau of Land Management (BLM) Yuma District is preparing an Amendment and Environmental Assessment to the Final Yuma District Resource Management Plan.

The management actions proposed in the Draft Amendment will include: determination of eligibility of portions of the Bill Williams River for inclusion in the National Wild and Scenic River System, consideration of authorization for an additional competitive-use off-highway vehicle race event, opening of additional lands for utility rights-of-way, and availability of additional lands for disposal.

DATES: Comments related to the identification of issues and planning criteria will be accepted until March 31, 1993.

ADDRESSES: Send comments to Herman L. Kast, District Manager, Yuma District, Bureau of Land Management, 3150 Winsor Avenue, Yuma, Arizona 85365.

FOR FURTHER INFORMATION CONTACT: Dave Curtis, Planning and Environmental Coordinator, Yuma District Office, telephone (602) 726–6300.

SUPPLEMENTARY INFORMATION:

1. The BLM is proposing to change the Resource Management Plan by determining the eligibility of portions of the Bill Williams River to be studied further for suitability and recommendation to Congress for inclusion in the National Wild and Scenic River System. At least two alternatives will be developed:

(a) Proposed eligibility classifications for various segments of the river.

(b) No action.

2. The BLM is considering changing the Resource Management Plan to allow the authorization of an additional site for a competitive-use off-highway vehicle race event to be located in Townships 12 and 13 North, Ranges 18 and 19 West, Gila and Salt River Meridian, Arizona. Approval for the race event would be contingent upon the completion of appropriate public involvement and environmental compliance documentation as part of the plan amendment process.

3. The BLM is proposing to change the Resource Management Plan to open the Crossman Peak Special Management Area to applications for utility rights-of-way. Approval of case-by-case applications for utility rights-of-way in this area would be contingent upon the completion of appropriate public involvement and site-specific environmental compliance documentation.

4. The BLM is proposing to change the Resource Management Plan to make additional Bureau of Reclamation-withdrawn lands located in Township 11 South, Range 25 West, Gila and Salt River Meridian, Arizona, available for disposal.

Approval of any disposal action would be on a case-by-case basis and would require Bureau of Reclamation approval. Any action would also be contingent upon the completion of appropriate public involvement and site-specific environmental compliance documentation.

A team of interdisciplinary specialists, whose backgrounds are in the resources to be affected, will be involved in the review and development of these proposals and in the preparation of an Environmental Assessment analyzing the potential impacts.

Public scoping meetings will be held to allow full participation in the plan amendment process. A public meeting will be held on March 17, 1993, at 7 p.m. at the Ramada London Bridge Resort, 1477 Queens Bay, Lake Havasu City, Arizona. The purpose of the meeting will be to identify the issues related to the proposed competitive-use off-highway vehicle event.

A public meeting will be held to identify the issues associated with the Crossman Peak utility rights-of-way proposal. This meeting is scheduled for March 18, 1993, at 7 p.m. at the same location as mentioned above.

Complete records of all phases of the planning process will be available for public review at the BLM Havasu Resource Area Office, 3189 Sweetwater Avenue, Lake Havasu City, Arizona 86403, and at the BLM Yuma District Office, 3150 Winsor Avenue, Yuma, Arizona 85365.

This Notice is published under the authority of title 43, Code of Federal Regulations, subpart 1610.2(c).

Dated: February 10, 1993.

Bill Watters,

Acting District Manager.

[FR Doc. 93–3929 Filed 2–16–93; 8:45 am]

BILLING CODE 4310-32-M

[ID–942–03–4730–02]

Filing of Plats of Survey; Idaho

The plat of survey of the following described land was officially filed in the Idaho State Office, Bureau of Land Management, Boise, Idaho, effective 9 a.m., on February 12, 1993.

The plat representing the dependent resurvey of portions of the south and west boundaries and subdivisional lines, and the subdivision of section 31, and the survey of Tract 37, Township 2 North, Range 4 West, Boise Meridian, Idaho, Group No. 853, was accepted February 3, 1993.

This survey was executed to meet certain administrative needs of the Bureau of Land Management.

All inquiries concerning the survey of the above-described land must be sent to the Chief, Branch of Cadastral Survey, Idaho State Office, Bureau of Land Management, 3380 Americana Terrace, Boise, Idaho 83706.

Dated: February 12, 1993.

Duane E. Olsen,

Chief Cadastral Surveyor for Idaho.

[FR Doc. 93–3933 Filed 2–18–93; 8:45 am]

BILLING CODE 4310-GG-M

[ID–942–03–4730–02]

Filing of Plats of Survey; Idaho

The plat of survey of the following described land was officially filed in the Idaho State Office, Bureau of Land Management, Boise, Idaho, effective 9 a.m., February 12, 1993.

The plat representing the dependent resurvey of a portion of the subdivisional lines, subdivision of section 13, and Lot 4 in section 13, and a metes-and-bounds survey in section 13, Township 10 North, Range 4 East, Boise Meridian, Idaho, Group No. 839, was accepted on February 3, 1993.

This survey was executed to meet certain administrative needs of the Bureau of Land Management.

All inquiries concerning the survey of the above-described land must be sent to the Chief, Branch of Cadastral Survey, Idaho State Office, Bureau of Land Management, 3380 Americana Terrace, Boise, Idaho 83706.

Dated: February 12, 1993.

Duane E. Olsen,

Chief Cadastral Surveyor for Idaho.

[FR Doc. 93–3934 Filed 2–18–93; 8:45 am]

BILLING CODE 4310-GG-M

[CA–940–4215–06; CACA 31210]

Notice of Proposed Withdrawal and Opportunity for Public Meeting; California

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The United States Department of Agriculture, Forest Service, has filed an application to withdraw 640 acres of National Forest System lands for protection of the Sugar Pine Point Research Natural Area near Cisco Grove. This notice closes the lands for up to 2 years from location and entry under the United States mining laws. The lands will remain open to all other uses which may be made of National Forest System lands.

DATE: Comments and requests for meeting should be received on or before May 20, 1993.

ADDRESSES: Comments and meeting requests should be sent to the California State Director, BLM, 2800 Cottage Way, room E–2845, Sacramento, California 95825.

FOR FURTHER INFORMATION CONTACT: Viola Andrade, BLM California State Office, 916–978–4820.

SUPPLEMENTARY INFORMATION: On December 1, 1992, the United States Department of Agriculture filed an application to withdraw the following described National Forest System lands from location and entry under the United States mining laws, subject to valid existing rights:

Mount Diablo Meridian

Tahoe National Forest

T. 16 N., R. 13 E.,
Sec. 20, all.

The area described contains 640 acres in Placer County.

For a period of 90 days from the date of publication of this notice, all persons who wish to submit comments, suggestions, or objections in connection with the proposed withdrawal may present their views in writing to the California State Director of the Bureau of Land Management.

Notice is hereby given that an opportunity for a public meeting is afforded in connection with the proposed withdrawal. All interested persons who desire a public meeting for the purpose of being heard on the proposed withdrawal must submit a written request to the California State Director within 90 days from the date of publication of this notice. Upon determination by the authorized officer that a public meeting will be held, a

notice of time and place will be published in the **Federal Register** at least 30 days before the scheduled date of the meeting.

The application will be processed in accordance with the regulations set forth in 43 CFR part 2300.

For a period of 2 years from the date of publication of this notice in the **Federal Register**, the lands will be segregated as specified above unless the application is denied or canceled or the withdrawal is approved prior to that date.

Dated: February 9, 1993.

Nancy J. Alex,

Chief, Lands Section.

[FR Doc. 93–3837 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–55–M

Fish and Wildlife Service

Endangered and Threatened Wildlife and Plants; Notice of Availability of Draft Florida Panther Habitat Protection Plan

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice.

SUMMARY: Under the guidance of the Florida Panther Interagency Committee, a draft "Florida Panther Habitat Protection Plan" for panther habitat in south Florida has been developed. A detailed "Overview" of the draft plan has been developed and is available for those who would prefer to conduct a more general review of the document. Those preferring to conduct a detailed review may obtain copies of the complete plan. Comments from all groups are welcome.

DATES: Comments from all interested parties must be received by April 20, 1993 in order to be considered in the development of the final habitat protection plan.

ADDRESSES: Please send correspondence concerning this notice to the Regional Director, U.S. Fish and Wildlife Service, 75 Spring Street, SW, Atlanta, Georgia 30303.

FOR FURTHER INFORMATION CONTACT: Mr. Dennis B. Jordan, Florida Panther Coordinator, U.S. Fish and Wildlife Service, 117 Newins-Ziegler Hall, University of Florida, Gainesville, Florida 32611–0307, telephone 904/392–1861.

SUPPLEMENTARY INFORMATION:

Background

The Florida panther (*Felis concolor coryi*) represents one of this Nation's most critically endangered animals—presently consisting of a single population in south Florida estimated to number 30 to 50 adults. The Florida panther's existence is severely threatened by both rapid and gradual extinction processes. Factors of concern include habitat loss, environmental contaminants, highways, prey resources, human activities, disease, and genetic erosion. Recent population viability analysis projections indicate that under existing demographic and genetic conditions the Florida panther will likely be extinct in 25–40 years. Actual time to extinction could be accelerated significantly by the occurrence of a catastrophic population reducing event.

Extinction of the Florida panther can be avoided only if programs to enhance existing genetic conditions and expand the existing population are successful. Programs to enhance genetic conditions must include actions to preserve existing genetic diversity, manage for inbreeding problems and restore historic gene flow. Programs to expand the population must include actions to preserve habitats that are considered essential to meeting the needs of a self-sustaining population in south Florida and actions to reestablish populations elsewhere within the panther's historic range. Population viability analysis data indicate that from a demographic and genetic standpoint a self-sustaining population should consist of a minimum of 50 adult panthers. The goal of the subject plan, therefore, is to bring about actions that will assure the long-term protection of landscapes in south Florida capable of supporting no fewer than 50 adult panthers.

Author

The primary author of this notice is Dennis B. Jordan, U.S. Fish and Wildlife Service, 117 Newins-Ziegler Hall, University of Florida, Gainesville, Florida 32611–0307, telephone 904/392–1861.

Authority

The authority for this action is the Endangered Species Act (16 U.S.C. 1531–1544).

Dated: February 8, 1993.

James W. Pulliam, Jr.,

Regional Director, Fish and Wildlife Service.

[FR Doc. 93–3682 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–55–P

INTERSTATE COMMERCE COMMISSION

[Finance Docket No. 32244]

The Wheeling & Lake Erie Railway Co.—Trackage Rights Exemption—Carey Short Line Corp.; Notice of Exemption

Carey Short Line Corporation (CSLC) has agreed to grant local trackage rights to The Wheeling & Lake Erie Railway Company (Wheeling) over the approximately 1.0-mile Carey Industrial Track, including sidings and industrial sidetracks, between milepost ±49.50 and milepost ±48.50, in Carey, OH, upon CSCL's acquisition of the line from Consolidated Rail Corporation (Conrail).[1] The trackage rights will provide Wheeling with direct access to shippers located on the line that it had previously served through a reciprocal switching agreement with Conrail. The trackage rights were to be effective on February 8, 1993.

This notice is filed under 49 CFR 1180.2(d)(7). If the notice contains false or misleading information the exemption is void *ab initio*. Petitions to revoke the exemption under 49 U.S.C. 10505(d) may be filed at any time. The filing of a petition to revoke will not stay the transaction. Pleadings must be filed with the Commission and served on: William C. Sippel, Oppenheimer Wolff & Donnelly, Two Illinois Center, Suite 2400, 233 North Michigan Avenue, Chicago, IL 60601.

As a condition to the use of this exemption, any employees affected by the trackage rights will be protected pursuant to Norfolk and Western Ry. Co.—Trackage Rights—BN, 354 I.C.C. 605 (1978), as modified in Mendocino Coast Ry., Inc.—Lease and Operate, 360 I.C.C. 653 (1980).

Decided: February 12, 1993.

By the Commission, David M. Konschnik, Director, Office of Proceedings.

Sidney L. Strickland, Jr.,

Secretary.

[FR Doc. 93–3918 Filed 2–18–93; 8:34 am]

BILLING CODE 7035–01–M

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[1] On January 19, 1993, CSLC filed a notice of exemption under 49 CFR 1150.31 for its acquisition of the Carey Industrial Track from Conrail. See Finance Docket No. 32236, Carey Short Line Corporation—Acquisition Exemption—Consolidated Rail Corporation. The parties intended to consummate the acquisition transaction after January 26, 1993, the effective date of that notice.

DEPARTMENT OF JUSTICE

Notice of Lodging of Consent Decree Pursuant to the Clean Air Act

In accordance with Departmental policy, 28 CFR 50.7, notice is hereby given that a proposed consent decree in *United States* v. *Ebasco Constructors, Inc.*, Civil Action No. 93–0101–PHX–SMM, was lodged on January 15, 1993 with the United States District Court for the District of Arizona. Defendants own and operate a rock processing facility near Lake Pleasant, Maricopa County, Arizona, in connection with defendants' construction of the New Waddell Dam. The complaint alleges that defendants violated the Clean Air Act by constructing the rock crushing facility without obtaining a permit as required by Arizona's State Implementation Plan and the Act, and by failing to comply with the New Source Performance Standards applicable to the rock crushing facility under the Act.

Under the proposed consent decree, defendants will pay a civil penalty of $320,000. Defendants must also comply with the injunctive provisions of the consent decree which are designed to ensure that emissions from the facility remain below permissible levels. Those measures include installation of containment and water spraying devices, and wind speed indicators. Defendants must also monitor emissions from the facility and inspect the emissions control equipment in accordance with the schedule set forth in the consent decree.

The Department of Justice will receive, for a period of thirty (30) days from the date of this publication, comments relating to the proposed consent decree. Comments should be addressed to the Assistant Attorney General for the Environment and Natural Resources Division, Department of Justice, Washington, DC 20530, and should refer to *United States* v. *Ebasco Constructors, Inc. et al.*, DOJ Ref. #90–5–2–1–1677.

The proposed consent decree may be examined at the Office of the United States Attorney, 4000 U.S. Courthouse, 320 N. First Avenue, Phoenix, AZ 85025; the Region IV Office of the Environmental Protection Agency, 75 Hawthorne Street, San Francisco, CA 94103; and at the Consent Decree Library, 1120 G Street, NW., 4th Floor, Washington, DC 20005, 202–624–0892. A copy of the proposed consent decree may be obtained in person or by mail from the Consent Decree Library, 1120 G Street, NW., 4th Floor, Washington, DC 20005. In requesting a copy, please refer to the referenced case and enclose a check in the amount of $5.50 (25 cents per page reproduction costs), payable to the Consent Decree Library.

John C. Cruden,

Chief, Environmental Enforcement Section, Environment & Natural Resources Division.

[FR Doc. 93–3935 Filed 2–18–93; 8:45 am]

BILLING CODE 4410–01–M

Notice of Lodging of Consent Decree Pursuant to the Resource Conservation and Recovery Act (RCRA)

In accordance with Departmental policy, 28 CFR 50.7, 38 FR 19029 (July 17, 1973), notice is hereby given that on February 4, 1993 a proposed Consent Decree in *United States of America* v. *GNB Inc.*, Civil Action No. 3:91–CV–1521–D, was lodged with the United States District Court for the Northern District of Texas.

In 1991, a Compliant in this action was filed by the United States of America against GNB Inc. under section 3008(a), (c) and (g) of RCRA, 42 U.S.C. 6928(a), (c) and (g), in connection with GNB's failure to implement proper groundwater monitoring at their lead-acid battery manufacturing plant in Farmers Branch, Texas.

The proposed Consent Decree entered between the United States and GNB Inc. provides for injunctive relief requiring GNB to implement a groundwater monitoring program in accordance with RCRA, and payment of a $135,000 civil penalty to the United States.

The Department of Justice will receive, for thirty (30) days from the date of publication of this notice, written comments relating to the proposed Consent Decree. Comments should be addressed to the Assistant Attorney General, Environment and Natural Resources Division, Department of Justice, P.O. Box 7611, Ben Franklin Station, Washington, DC 20044, and should refer to *United States* v. *GNB Inc.*, DOJ Ref. No. 90–7–1–627.

The proposed Consent Decree may be examined at the office of the United States Attorney, Northern District of Texas, U.S. Courthouse and Federal Building, 1100 Commerce St., Dallas, Texas 75242; the Region VI Office of the Environmental Protection Agency, 1445 Ross Avenue, Dallas, Texas 75202; and at the Consent Decree Library, 1120 G Street NW., 4th Floor, Washington, DC 20005, 202–624–0892. A copy of the proposed consent decree may be obtained in person or by mail from the Consent Decree Library, 1120 G Street NW., 4th Floor, Washington, DC 20005. In requesting a copy, please enclose a check in the amount of $8.50 (25 cents per page reproduction charge) payable to the Consent Decree Library.

Myles E. Flint,

Acting Assistant Attorney General, Environment and Natural Resources Division.

[FR Doc. 93–3938 Filed 2–18–93; 8:45 am]

BILLING CODE 4410–01–M

Notice of Lodging of Consent Decree Pursuant to the Clean Air Act

In accordance with Departmental Policy, 28 CFR 50.7, notice is hereby given that a proposed consent decree in *United States* v. *New York City*, Civil Action No. 93–436, was lodged on January 22, 1993 with the United States District Court for the Southern District of New York. The Consent Decree resolves the City of New York's violations of the Clean Air Act 42 U.S.C. 7400 et seq. (the "Act") and the requirements of 6 NYCRR part 230. At 41 facilities, the City is in violation of 6 NYCRR parts 230.2(a) and (c) for transferring gasoline into storage tanks without the requisite Stage I vapor recovery equipment and/or for transferring gasoline into motor vehicle fuel tanks without proper Stage II vapor collection systems. The Consent Decree requires the City of New York to pay a civil penalty of $200,000.00. The Decree also requires the City to award contracts to construction managers to undertake and complete the retrofitting or initial installation of Stage I and Stage II vapor collection systems as required by NYCRR part 230 of the federally enforceable New York State Implementation Plan.

The Department of Justice will receive, for a period of thirty (30) days from the date of this publication, comments relating to the proposed consent decree. Comments should be addressed to the Assistant Attorney General for the Environment and Natural Resources Division, Department of Justice, Washington, DC 20005 and should refer to *United States* v. *New York City*, D.O.J. Reference No. 90–5–2–1–1577.

The proposed consent decree may be examined at the Office of the United States Attorney, One St. Andrews Place, New York, New York 10007; the Region II Office of the Environmental Protection Agency, 26 Federal Plaza, New York, New York 10278; and the Consent Decree Library, 1120 G Street, NW, 4th Floor, Washington, DC 20005, 202–624–0892. A copy of the proposed consent decree may be obtained in person or by mail from the Consent Decree Library, 1120 G Street, NW., 4th Floor, Washington, DC 20005. In requesting a copy, please refer to the

referenced case and enclose a check in the amount of $5.50 (25 cents per page reproduction costs), payable to the Consent Decree Library.

John C. Cruden,

Chief, Environmental Enforcement Section, Environment and Natural Resources Division.

[FR Doc. 93–3936 Filed 2–18–93; 8:45 am]

BILLING CODE 4410–01–M

Notice of Lodging of Consent Decree Pursuant to Clean Water Act and Oil Pollution Act of 1990

In accordance with United States Department of Justice policy, as set out in 28 CFR 50.7, notice is hereby given of the lodging of proposed consent decrees in *United States* v. *U.S. Oil Company*, Civil Action No. C93–5068B, (W.D. Wash.) and *United States* v. *Texaco Refining and Marketing, Inc.*, Civil Action No. C93–181C, (W.D. Wash.). Both actions were brought on February 10, 1993 to address violations of the Clean Water Act (CWA), 33 U.S.C. 1251, *et seq.*, as amended by the Oil Pollution Act of 1990 (OPA), 33 U.S.C. 2701, *et seq.*, and OPA itself, arising out of the discharge of oil into waters of the United States and the adjoining shoreline by U.S. Oil from its refinery at Tacoma, Washington and by Texaco Refining and Marketing Inc. from its refinery at Anacortes, Washington.

Pursuant to the proposed decree in *United States* v. *U.S. Oil*, U.S. Oil is required to: (1) Complete the spill cleanup at a cost of approximately $4 million; (2) install and maintain state-of-the-art spill prevention equipment at a cost of approximately $800,000; (3) pay the government's removal costs (approximately $60,000); and (4) pay a civil penalty of $425,000 to the United States (in addition to a $45,000 civil penalty already paid to the State of Washington.)

Pursuant to the proposed decree in *United States* v. *Texaco*, Texaco is required to: (1) Complete the spill cleanup at a cost of approximately $8 million; (2) install and maintain state-of-the-art spill prevention equipment at a cost of approximately $800,000; (3) pay the government's removal costs (approximately $125,000 already paid plus all future removal costs); and (4) pay a civil penalty of $480,000 to the United States (in addition to a $20,000 civil penalty already paid to the State of Washington.)

Both consent decrees contain reopener provisions authorizing the United States to reopen the cases in the event that additional oil attributable to the spills is found and the actions taken under the decrees do not adequately protect the public and the environment.

The United States Department of Justice will receive comments on the proposed decrees for a period of thirty days after publication. Comments should be addressed to the Acting Assistant Attorney General of the Environment and Natural Resources Division, United States Department of Justice, Washington, DC, 20530. Comments on the U.S. Oil decree should reference *United States* v. *U.S. Oil Company*, DJ Ref. #90–5–1–1–3790; comments on the Texaco decree should reference *United States* v. *Texaco Refining and Marketing Inc.*, DJ Ref. #90–5–1–1–3766.

The proposed decrees may be examined at the offices of the United States Attorney for the Western District of Washington, 3600 Seafirst 5th Avenue Plaza, 800–5th Avenue, Seattle, Washington 98104; the United States Environmental Protection Agency-Region 10, 1200–6th Avenue, Seattle Washington, 98101; the District Legal Officer of the 13th Coast Guard District, Jackson Federal Building, 915–2nd Avenue, room 3460, Seattle, Washington, 98174; or the United States Department of Justice Consent Decree Library, 1120 G Street, NW 4th Floor, Washington, DC 20005 (202–624–0892). When requesting copies, please enclose a check in the amount of $10.50 (twenty-five cents per page reproduction cost) for the U.S. Oil decree and $10.75 for the Texaco decree, payable to the Consent Decree Library. When requesting copies, please refer to either *United States* v. *U.S. Oil Company*, DJ Ref. #90–5–1–1–3790, or *United States* v. *Texaco Refining and Marketing Inc.*, DJ Ref. #90–5–1–1–3766.

John C. Cruden,

Chief, Environmental Enforcement Section, Environment and Natural Resources Division.

[FR Doc. 93–3937 Filed 2–18–93; 8:45 am]

BILLING CODE 4410–01–M

Federal Bureau of Prisons

Intent to Prepare a Draft Environmental Impact Statement (DEIS) for the Construction of a Metropolitan Detention Center in King County, WA

AGENCY: Federal Bureau of Prisons, U.S. Department of Justice.

ACTION: Notice of intent to prepare a Draft Environmental Impact Statement (DEIS).

SUMMARY:

1. Proposed Action

The United States Department of Justice, Federal Bureau of Prisons has determined that a new Metropolitan Detention Center (MDC) is needed in its system. The Bureau of Prisons will evaluate two proposed sites located in King County, Washington.

The proposed sites are:

(A) The "Wheelabrator Site", approximately 12 acres, located at 80 South Hudson Street, Seattle, Washington.

(B) The "SeaTac Site", approximately 25 acres, bordered on the north by South 200th Street, on the south by South 204th Street, on the west by South 24th Avenue, and on the east by South 28th Avenue, SeaTac, Washington.

The Federal Bureau of Prisons proposes to construct a 500-unit detention facility for individuals who are awaiting trial, sentencing, or having other business before the United States District Court. As such, the facility is considered an extension of the Federal judiciary and law enforcement activity in Seattle, Washington.

It is anticipated that both of the sites are of sufficient size to provide space for detainee housing, programs, services and support areas, as well as administration, staff training and parking.

2. The Process

In the process of evaluating the two sites, several aspects will receive detailed examination including: utilities, traffic patterns, noise levels, visual intrusion, threatened and endangered species, cultural resources and socio-economic impacts.

3. Alternatives

In developing the DEIS, the options of no action and alternative sites for the proposed facility will be fully and thoroughly examined.

4. Scoping Process

During the preparation of the DEIS, there will be numerous opportunities for public involvement in order to determine the issues to be examined. A Scoping Meeting will be held at 1:30 p.m. on March 16, 1993, at the Jackson Federal Building, located at 915 Second Avenue, Fourth Floor North Auditorium, Seattle, Washington. The meeting will be well publicized and will be held at a time which will make it possible for the public and interested agencies or organizations to attend. In addition, a number of Public Information Meetings will be conducted by representatives of the Bureau of Prisons with interested citizens, officials and community leaders.

5. DEIS Preparation

Public notice will be given concerning the availability of the DEIS for public review and comment.

6. Address

David J. Dorworth, Sr. Site Selection Specialist, Site Selection and Environmental Review Branch.

Federal Bureau of Prisons, 320 First Street, Northwest, Washington, DC 20534. (202) 514–6470.

Dated: February 12, 1993.

David J. Dorworth,

Senior Site Selection Specialist, Site Selection and Environmental Review Branch, U.S. Department of Justice.

[FR Doc. 93–3848 Filed 2–18–93; 8:45 am]

BILLING CODE 4410–05–M

LEGAL SERVICES CORPORATION

Grant Award for Legal Service State Support Center in Hawaii

AGENCY: Legal Services Corporation.

ACTION: Announcement of intention to award grant.

SUMMARY: The Legal Services Corporation hereby announces its intention to award a one-time, non-recurring grant to provide substantive and training support to legal service programs in the State of Hawaii. The Corporation plans to award a grant in the amount of $144,282 to Legal Aid Society of Hawaii, Inc.

This one-time grant will be awarded pursuant to authority conferred by section 1006(a)(3) of the Legal Services Corporation Act of 1974, as amended. This public notice is issued with a request for comments and recommendations within a period of 30 days from the date of publication of this notice. The grant award will not become effective and grant funds will not be distributed prior to expiration of this 30-day period.

DATES: All comments and recommendations must be received on or before 5 p.m. March 22, 1993.

ADDRESSES: Comments are to be sent to the Office of Field Services, Legal Services Corporation, 750 First Street, NE., 11th Floor, Washington, DC 20002–4250.

FOR FURTHER INFORMATION CONTACT: Phyllis Doriot, Manager, Grants and Budgets Division, Office of Field Services, (202) 336–8825.

Dated: February 16, 1993.

Charles T. Moses III,

Deputy Director, Office of Field Services.

[FR Doc. 93–3958 Filed 2–18–93; 8:45 am]

BILLING CODE 7050–01–M

NATIONAL ADVISORY COUNCIL ON THE PUBLIC SERVICE

Meetings

AGENCY: National Advisory Council on the Public Service (NACPS).

ACTION: Notice of meeting.

DATE AND TIME: Monday, March 15, 1993, 9 a.m. to 3 p.m.

PLACE: Dupont Plaza Hotel, 1500 New Hampshire Avenue, NW., Washington, DC.

STATUS: Open.

SUMMARY:

Agenda:

9 a.m.–10 a.m.

Council Business

- Summary of February public hearing
- Review of Committee Activities to date
- Selection of publications committee

10 a.m.–10:15 a.m.
Break
10:15 a.m.–11:15 a.m.
Presentation by Mark Abramson, President, The Council for Excellence in Government
11:15 a.m.–11:45 a.m.
Public Comment
11:45 a.m.–1:15 p.m.
Members Only Working Lunch—Presenter: Dr. Paul Lorentzen, University of Southern California
1:30 p.m.–3 p.m.

Committee meetings

- Workforce Status
- Recruitment and Retention
- Student Interest
- Motivation and Excellence

3 p.m. Adjournment

FOR FURTHER INFORMATION CONTACT: Jane Riddleberger, NACPS, Suite 420, National Press Building, 529 14th Street, NW., Washington, DC 20045 (202–724–0796).

Dated: February 16, 1993.

Jean M. Curtis,

Executive Director.

[FR Doc. 93–3896 Filed 2–18–93; 8:45 am]

BILLING CODE 7525–01–M

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice 93–01]

NASA Advisory Council (NAC), Space Science and Applications Advisory Committee (SSAAC), Astrophysics Subcommittee; Meeting

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of meeting change.

"FEDERAL REGISTER" CITATION OF PREVIOUS ANNOUNCEMENT: 58 FR 7158, Notice Number 93–009, February 4, 1993.

PREVIOUSLY ANNOUNCED DATES AND ADDRESSES OF MEETING: February 18, 1993, 9:30 a.m. to 5:15 p.m.; and February 19, 1993, 8:15 a.m. to 4:30 p.m.; The National Aeronautics and Space Administration, room MIC–5, 300 E Street, SW., Washington, DC 20546.

CHANGES IN THE MEETING: Dates changed to March 30, 1993, 9:30 a.m. to 5:15 p.m.; and March 31, 1993, 8:15 a.m. to 4:30 p.m. Address changed to BDM Conference Center Auditorium, 9705 Patuxent Woods Drive, Columbia, MD 21046.

FOR FURTHER INFORMATION CONTACT: Ms. Lia LaPiana, Code SZ, National Aeronautics and Space Administration, Washington, DC 20546 (202/358–0346).

Dated: February 12, 1993.

John W. Gaff,

Advisory Committee Management Officer, National Aeronautics and Space Administration.

[FR Doc. 93–3883 Filed 2–18–93; 8:45 am]

BILLING CODE 7510–01–M

NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

Institute of Museum Services

Museum Leadership Initiatives; Grant Application Availability

AGENCY: Institute of Museum Services, NFAH.

ACTION: Notice of grant application availability for museum leadership initiatives program.

SUMMARY: This grant application announcement applies to a new funding category offered by the Institute of Museum Services (IMS), the Museum Leadership Initiatives award under 45 CFR part 1180 for Fiscal Year 1993.

DEADLINE DATES FOR TRANSMITTAL OF APPLICATIONS: An application for a new grant must be mailed or hand-delivered by Friday, May 7, 1993.

APPLICATIONS DELIVERED BY MAIL: An application sent by mail must be addressed to the Institute of Museum Services, 1100 Pennsylvania Avenue, NW., Room 609, Washington, DC 20506.

An applicant must be prepared to show one of the following as proof of timely mailing:

(1) A legibly dated U.S. Postal Service Postmark.

(2) A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.

(3) A dated shipping label, invoice, or receipt from a commercial carrier.

(4) Any other dated proof of mailing acceptable to the Director of IMS.

If any application is mailed through the U.S. Postal Service, the Director does not accept the either of the following as proof of mailing: (1) A private metered postmark; or (2) a mail receipt that is not date-cancaled by the U.S. Postal Service.

APPLICATIONS DELIVERED BY HAND: Applications that are hand-delivered must be taken to the Institute of Museum Services, 1100 Pennsylvania Avenue, NW., room 609, Washington, DC 20506. Hand-delivered applications will be accepted between 9 a.m. and 4:30 p.m. (Washington DC time) daily, except Saturdays, Sundays, and Federal holidays. An application that is hand-delivered will not be accepted after 4:30 p.m. on the deadline date.

ADDRESSES: Institute of Museum Services, 1100 Pennsylvania Avenue, NW., Washington, DC 20506.

FOR FURTHER INFORMATION CONTACT: Mamie Bittner, IMS Public Information Officer, (202) 606–8536. Deaf and hearing impaired individuals may call the TDD Line, (202) 606–8636.

SUPPLEMENTARY INFORMATION: The purpose of this award is to support projects that develop and implement mentoring relationships for paid or volunteer museum staff that will result in a gain of knowledge, skills and abilities which can be applied to improve museum operations and services. For the purposes of this request for proposals, a mentoring relationship is one that is characterized by a substantial commitment of resources over time from at least two parties, one of whom is a staff member (paid or unpaid) of a museum. Successful proposals will be those which can be expected to be replicated successfully.

Eligibility

Applicants may include museums, museum organizations, individuals, universities, consortia of museums, or other organizations, depending on the specifications outlined in the proposal.

Available Funds

An award made through the Museum Leadership Initiatives program may not exceed $248,000; awards are likely to be less. Awards are for projects that will be completed within an eighteen month period. IMS reserves the option of awarding multiple, single, or no awards as a result of this request for proposals

Application Forms

Applicants may obtain application packets for the Museum Leadership Initiatives program by writing or telephoning the Institute of Museum Services, 1100 Pennsylvania Avenue, NW., room 609, Washington, DC 20506, (202) 606–8539. Deaf and hearing impaired individuals may call the TDD Line, (202) 606–8636.

Applicable Regulations: None.

(Catalogue of Federal Domestic Assistance No. 45.301, Institute of Museum Services)

Dated: January 27, 1993.

Linda Bell,

Acting Director, Institute of Museum Services.

[FR Doc. 93–3707 Filed 2–18–93; 8:45 am]

BILLING CODE 7036–01–M

NUCLEAR REGULATORY COMMISSION

[Docket No. 030–31765–EA; ASLBP No. 93–674–03–EA]

Oncology Services Corp.; Establishment of Atomic Safety and Licensing Board

Pursuant to delegation by the Commission dated December 29, 1972, published in the **Federal Register**, 37 FR 28710 (1972), and §§ 2.105, 2.700, 2.702, 2.714, 2.714a, 2.717 and 2.721 of the Commission's Regulations, all as amended, an Atomic Safety and Licensing Board is being established in the following proceeding.

Oncology Services Corporation, Harrisburg, PA

Byproduct Material License No. 37–28540–01 EA 93–006

This Board is being established pursuant to the request by the Oncology Services Corporation (the Licensee), dated February 2, 1993, for a hearing regarding an Order issued by the Deputy Executive Director for Nuclear Materials Safety, Safeguards, and Operations Support, dated January 20, 1993, entitled "Order Suspending License (Effective Immediately)" (58 FR 6825–27, February 2, 1993). The Order suspends License No. 37–28540–01 pending further Order. This suspension precludes the performance of any licensed activity at any of the Licensee's facilities authorized by the License.

An Order designating the time and place of any hearing will be issued at a later date.

All correspondence, documents and other materials shall be filed in accordance with 10 CFR 2.701. The Board is comprised of the following administrative judges:

G. Paul Bollwerk, III, Chairman, Atomic Safety and Licensing Board Panel, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Dr. Charles N. Kelber, Atomic Safety and Licensing Board Panel, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Dr. Peter S. Lam, Atomic Safety and Licensing Board Panel, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Issued at Bethesda, Maryland, this 10th day of February 1993.

B. Paul Cotter, Jr.,

Chief Administrative Judge, Atomic Safety and Licensing Board Panel.

[FR Doc. 93–3885 Filed 2–18–93; 8:45 am]

BILLING CODE 7590–01–M

[Docket No. 50–305]

Wisconsin Public Service Corp., Wisconsin Power and Light Co., Madison Gas and Electric Co.; Consideration of Issuance of Amendment to Facility Operating License, Proposed No Significant Hazards Consideration Determination, and Opportunity for Hearing

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating License No. DPR–43 issued to Wisconsin Public Service Corporation, Wisconsin Power and Light Company, Madison Gas and Electric Company (the licensees), for operation of the Kewaunee Nuclear Power Plant, located in Kewaunee County, Wisconsin.

The proposed amendment would provide interim alternate plugging criteria for the Kewaunee steam generators based on eddy current test indications in the tube support plate regions. Technical changes are also proposed for the affected bases sections, and administrative changes are proposed for both the affected Technical Specifications and the bases.

Before issuance of the proposed license amendments, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences or an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR

50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

The proposed change was reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed change will not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated.

The probability of an accident previously evaluated will not be significantly increased by this proposed change to incorporate an IPC [interim plugging criteria] of 1.0 volt for the 1993–1994 operating cycle. The IPC repair limit will be applied to ODSCC [outside diameter stress corrosion cracking] occurring within the thickness of the TSPs [tube support plates]. A tube integrity assessment performed in accordance with the criteria of RG 1.121 demonstrates that the tubes in the Kewaunee SGs [steam generators] maintain a safety factor of three times normal operating pressure differential for crack indications with voltages up to 4.05 volts, regardless of indicated depth, with no credit taken for potential constraint of the TSP under normal and postulated accident condition loadings. This structural limit is based on the lower 95% confidence level limit of the burst pressure versus voltage correlation. The proposed 1.0 volt repair criteria provides an extremely conservative margin of safety to the structural limit considering the NDE [non-destructive evaluation] uncertainty and expected growth rates of ODSCC at Kewaunee.

The consequences of an accident previously evaluated will not be significantly increased by application of an IPC. Although tubes are not expected to burst under accident conditions, it cannot be assured that the cracks will not leak during postulated accident condition loadings as discussed in the USAR [Updated Safety Analysis Report]. Of the accidents that are affected by primary-to-secondary leakage and steam release to the environment, the SLB [steam line break] is most limiting relative to the potential for offsite doses. Upon implementation of the IPC, it will be verified that the distribution of ODSCC indications at the TSP intersections left in service for the 1993–1994 operating cycle are such that primary-to-secondary leakage will not exceed 1.0 gpm in the affected loop during an SLB event. This level of tube leakage will result in radiological consequences that are well within a small fraction of the 10 CFR 100 limit at the site boundary.

(2) Create the possibility of a new or different kind of accident from any previously evaluated.

Implementation of the proposed IPC for ODSCC for the SG TSPs does not reduce the overall safety and functional requirements of the SG tube bundles. The SG tube bundles will continue to sustain, in accordance with the criteria of RG 1.121, the loads during normal operation and the various postulated accident conditions without loss of safety function.

Implementation of the IPC will be supplemented by a reduced operating leakage requirement of 150 gpd per SG. The 150 gpd restriction will provide for leakage detection and plant shutdown in the event of the occurrence of an unexpected single crack resulting in leakage that is associated with the longest permissible crack length. The operating leakage limit is based on leak-before-break considerations, critical crack length and predicted leakage. Therefore, the proposed change does not create the possibility of a new or different kind of accident.

(3) Involve a significant reduction in the margin of safety.

Application of the IPC repair limit for the Kewaunee SGs has been demonstrated to maintain tube integrity commensurate with the RG 1.121 criteria. RG 1.121 describes a method acceptable to the NRC staff for meeting GDCs [General Design Criteria] 2, 14, 15, 31, and 32. This is accomplished by determining the limiting condition of degradation of SG tubing, as established by inservice inspection, for which tubes with unacceptable cracking should be removed from service. Upon implementation of the IPC, even under worst case conditions, the occurrence of ODSCC at the TSPs is not expected to lead to an SG tube rupture event during normal or faulted plant conditions. The most limiting event would be a potential increase in leakage during an SLB event. Excessive leakage during an SLB is precluded by verifying that the expected EOC [end of cycle] crack distribution of ODSCC indications at TSP intersections would result in primary-to-secondary leakage less than 1.0 gpm. With this level of leakage, the radiological consequences from tubes remaining in service is a small fraction of the 10 CFR 100 limits.

The combined effects of a LOCA [loss-of-coolant accident] plus SSE [safe shutdown earthquake] on the SGs were assessed as required by GDC 2. This issue was addressed for the Kewaunee SGs through the application of leak-before-break (LBB) principles to the primary loop piping. A detailed LBB analysis has been performed for Kewaunee. Based on the results, it is concluded that the LBB (as permitted by GDC 4) is applicable to the Kewaunee RCS [reactor coolant system] primary loops and, thus, the probability of breaks in the primary loop piping is sufficiently low that they need not be considered in the structural design basis of the plant. Excluding breaks in the RCS primary loops, the LOCA loads from the large branch line breaks were also assessed and found to be of insufficient magnitude to result in SG tube collapse. Based on recent analysis results, no tubes are expected to collapse or deform to the degree that secondary-to-primary in-leakage would be increased over current expected levels. On this basis no tubes need to be excluded from the IPC for reasons of deformation resulting from combined LOCA and SSE loadings.

Addressing the RG 1.83 considerations, implementation of the IPC will include a 100% bobbin coil inspection of the TSPs. This will be supplemented by a reduced operating leak rate limit, eddy current inspection guidelines to provide the methodology for reporting field bobbin voltage measurements consistent with the development of the alternate repair limit, and RPC [rotating pancake coil] probe inspection requirements.

Therefore, the proposed change will not result in a significant reduction in the margin of safety.

The NRC staff has reviewed the licensee's analysis and based on this review it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination. The Commission will not normally make a final determination unless it receives a request for a hearing.

Written comments may be submitted by mail to the Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and should cite the publication date and page number of this **Federal Register** notice. Written comments may also be delivered to room P–223, Phillips Building, 7920 Norfolk Avenue, Bethesda, Maryland, from 7:30 a.m. to 4:15 p.m. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555. The filing of requests for hearing and petitions for leave to intervene is discussed below.

By March 22, 1993, the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written petition for leave to intervene. Requests for a hearing and petitions for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document room located at the University of Wisconsin Library Learning Center, 2420 Nicolet Drive, Green Bay, Wisconsin 54301. If a request for a hearing or petition for leave to intervene is filed by the above date, the

Commission or an Atomic Safety and Licensing Board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) The nature of the petitioner's right under the Act to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, by the above date. Where petitions are filed during the last ten (10) days of the notice period, it is requested that the petitioner promptly so inform the Commission by a toll-free telephone call to Western Union at 1 (800) 325–6000 (in Missouri 1 (800) 342–6700). The Western Union operator should be given Datagram Identification Number 3737 and the following message addressed to John N. Hannon: petitioner's name and telephone number; date petition was mailed; plant name; and publication date and page number of this **Federal Register** notice. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to Foley and Lardner, Attention: Mr. Bradley D. Jackson, One South Pinckney Street, P.O. Box 1497, Madison, Wisconsin 53701–1497, attorney for the licensee.

Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer, or the Atomic Safety and Licensing Board that the petition and/or request, should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)–(v) and 2.714(d).

For further details with respect to this action, see the application for amendment dated February 8, 1993, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, and at the local public document room located at the University of Wisconsin Library Learning Center, 2420 Nicolet Drive, Green Bay, Wisconsin 54301.

Dated at Rockville, Maryland, this 12th day of February, 1993.

For the Nuclear Regulatory Commission.

John N. Hannon,

Project Director, Project Directorate III–3, Division of Reactor Projects III/IV/V, Office of Nuclear Reactor Regulation.

[FR Doc. 93–3884 Filed 2–18–93; 8:45 am]

BILLING CODE 7590–01–M

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-31857; File No. SR-MSE-93-01]

Self-Regulatory Organizations; Notice of Filing and Order Granting Accelerated Approval of Proposed Rule Change of the Midwest Stock Exchange, Incorporated Requesting a Sixty Day Extension of the SuperMAX and Enhanced SuperMAX Pilot Programs

February 12, 1993.

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934, 15 U.S.C. 78s(b)(1) ("Act"), notice is hereby given that on February 9, 1993, the Midwest Stock Exchange, Incorporated ("MSE" or "Exchange") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II, and III below, which have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons, and simultaneously publishing an order granting accelerated approval of the proposed rule change.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The MSE proposes to extend its SuperMAX and Enhanced SuperMAX pilot programs for an additional sixty day period. The SuperMAX program guarantees the execution price of small agency market orders received over the Midwest Automated Execution System ("MAX") at an automatically improved price over the consolidated best bid or offer according to certain pre-defined criteria. The Commission first approved the pilot program for SuperMAX on May 14, 1990.[1] Subsequent extensions were requested and approved. The current extension of the pilot program expires on February 14, 1993.

The enhanced version of SuperMAX ("Enhanced SuperMAX") operates as a separate system and is available to MSE specialists as an addition, or as an alternative, to SuperMAX. The pilot program for the Enhanced version of SuperMAX was first approved on December 10, 1991.[2] Subsequent extensions were requested and approved. The current extension of the pilot program is set to expires on February 14, 1993.

The MSE proposes to extend the pilot programs for the SuperMAX and the Enhanced SuperMAX systems until April 14, 1993.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in section (A), (B), and (C) below, of the most significant aspects of such statements.

(A) Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

The sixty day extension of the pilot period is sought to allow the Exchange to determine which system it intends to implement. The Exchange will supply the Commission with requested trading data regarding both systems and also will seek to implement one version of SuperMAX on a permanent basis.

The proposed rule change is consistent with section 6 of the Securities Exchange Act of 1934 in that it will promote just and equitable principles of trade and will help to perfect the mechanism of free and open markets and a national market system and will foster competition among markets.

(B) Self-Regulatory Organization's Statement on Burden on Competition

Midwest Stock Exchange, Incorporated believes that no burden will be placed on competition as a result of the proposed rule change.

(C) Self-Regulatory Organization's Statement of Comments on the Proposed Rule Change Received From Members, Participants or Others

No comments were received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The MSE requests that the Commission find good cause for approving the proposed rule change extending its pilot programs until April 14, 1993, prior to the thirtieth day after publication of the notice in the Federal Register. The proposed rule change implementing the pilot programs has been published for comment in the Federal Register previously, and there have been no adverse comments on it. The MSE believes it appropriate to approve the extension of the pilot programs so that the Exchange may have additional time to consider which system it intends to implement.

The Commission finds that the proposed rule change extending the pilot programs is consistent with the requirements of the Act and the rules and regulations thereunder applicable to the MSE and, in particular, the requirements of Section 6, and the rules and regulations thereunder.

The Commission finds good cause for approving the proposed rule change on an accelerated basis prior to the thirtieth day after the date of publication of the notice of filing thereof in that additional time for consideration of the two systems is required.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW., Washington DC 20549. Copies of the submissions, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying at the principal office of the above-referenced self-regulatory organization. All submissions should refer to the file number in the caption above and should be submitted by March 25, 1993.

It is Therefore ordered, Pursuant to section 19(b)(2) of the Act, that the proposed rule change extending the pilot program for the SuperMAX and Enhanced SuperMAX systems until April 14, 1993, be, and hereby is, approved.

For the Commission by the Division of Market Regulation, pursuant to delegated authority, 17 CFR 200.30-3(a)(12).

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 93-3950 Filed 2-18-93; 8:45 am]

BILLING CODE 8010-01-M

[1] See Securities Exchange Act Release No. 28014 (May 14, 1990), 55 FR 20990 (order approving SR-MSE-90-05).

[2] See Securities Exchange Act Release No. 30058 (December 10, 1991), 56 FR 65765 (order approving SR-MSE-91-12).

DEPARTMENT OF STATE

[Public Notice 1766]

United States Organization for the International Telegraph and Telephone Consultative Committee (CCITT), Study Group B Meeting

The Department of State announces that Study Group B of the U.S. Organization for the International Telegraph and Telephone Consultative Committee (CCITT) will meet on Tuesday, April 6, 1993 in room 1912 from 9:30 a.m. to 5 p.m., Department of State: 2201 C Street NW., Washington, DC 20520.

The Agenda of the April meeting will review the results of the January, 1993 meeting of Study Group XVIII. The meeting will also consider Contributions for CCITT Study Group XI Meeting, May 3–19, 1993, proposed structure and questions proposed for Study Groups XI and XVIII during the 1993–1996 Plenary Period, and consider any other business raised within the terms of reference of U.S. Study Group B. The Delegation for Study Group XI will also be considered.

Members of the general public may attend the meeting and join in the discussion, subject to the instructions of the Chair. Admittance of public members will be limited to the seating available. In that regard, entrance to the Department of State building is controlled and entry will be facilitated if arrangements are made in advance of the meeting. Persons who plan to attend should so advise the Office of Gary Fereno, Department of State, (202) 647–0201, FAX (202) 647–7407. The above includes government and non-government attendees. Public visitors will be asked to provide their date of birth and Social Security number at the time they register their intention to attend and must carry a photo ID with them to the meeting in order to be admitted. All attendees must use the C Street entrance.

Dated: February 2, 1993.

Earl S. Barbely,

Director, Telecommunications and Information Standards, Chairman U.S. CCITT, National Committee.

[FR Doc. 93–3917 Filed 2–18–93; 8:45 am]

BILLING CODE 4710-45-M

[Public Notice 1764]

Shipping Coordinating Committee Sub-Committee on Safety of Life at Sea and Associated Bodies; Working Group on Stability and Load Lines and on Fishing Vessels Safety, Meeting

The Working Group on Stability and Load Lines and on Fishing Vessels Safety of the Subcommittee on Safety of Life at Sea (SOLAS) will conduct an open meeting at 10:30 a.m. on March 11, 1993, in room 2415, at U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593. The purpose of the meeting is to finalize preparations for the International Conference on the Development of the Protocol to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977 (SFV 77), which is scheduled for March 22, 1993, at Torremolinos Spain.

The items of particular interest are:

a. The Draft Protocol to the Torremolinos International Convention for the SFV 77.

b. The draft U.S. position papers for the use of survival craft and immersion suits on fishing vessels greater than 79 feet (24 meters) in length.

Members of the public may attend these meetings up to the seating capacity of the room. Interested persons may seek information by writing: Commandant (G–MVI–4), U.S. Coast Guard, room 1405, 2100 Second Street, SW., Washington, DC 20593 or by calling: (202) 267–2307.

Dated: February 11, 1993.

Geoffrey Ogden,

Chairman, Shipping Coordinating Committee.

[FR Doc. 93–3919 Filed 2–18–93; 8:45 am]

BILLING CODE 4710-07-M

[Public Notice 1765]

Shipping Coordinating Committee, International Maritime Organization (IMO) Legal Committee; Meeting

The U.S. Shipping Coordinating Committee (SHC) will conduct an open public meeting at 10 a.m., on Wednesday, March 10, 1993, in room 2415 of U.S. Coast Guard Headquarters, 2100 Second Street, SW., Washington, DC.

The primary purpose of this meeting is to prepare for the 68th Session of the International Maritime Organization (IMO) Legal Committee, scheduled to convene March 15, 1993, in London, and the Diplomatic Conference on Maritime Liens and Mortgages, which will be held in Geneva, April 19 through May 7, 1993.

To facilitate the attendance of those participants who may be interested in only certain aspects of the public meeting, the first subject addressed will be the various issues before the IMO Legal Committee with particular focus on the draft Convention on Liability and Compensation for Damages Arising from the Maritime Carriage of Hazardous and Noxious Substances (the HNS Convention). The second subject, which will be considered at approximately 12:30 p.m., will be a discussion on preparations for the April Diplomatic Conference on Maritime Liens and Mortgages.

By way of background, since 1987, the Legal Committee has been working to develop a draft HNS Convention. At the 67th Session held last October, the Legal Committee continued a final reading of the draft text, which it began at the 66th Session in March of 1992. The work will resume at the 68th Session of the Committee, March 15, 1993.

As originally envisioned in 1969 when first discussed, and at the 1984 Diplomatic Conference which rejected a draft HNS convention, the HNS regime was originally intended to apply to catastrophes caused by substances other than oil. For example, it would have applied to incidents such as the Texas City disaster in 1947 which resulted in over 500 deaths and 3000 injuries from explosions and fires caused by ammonium nitrate. While today's draft HNS Convention would still cover such catastrophes, it would also extend to smaller incidents caused by a broader range of substances and currently would include oil pollution damage to the extent not already covered by the international oil pollution liability regimes.

The draft HNS Convention would impose strict liability upon the shipowner for damages arising from hazardous substances up to a yet-to-be-determined limit of liability with a second-tier international fund available to provide compensation for catastrophic damages or when the shipowner, for one reason or another, could not pay. The second-tier international fund, modeled after the International Oil Pollution Compensation Fund, would be financed by levies imposed upon hazardous cargo shipments.

The draft convention would provide compensation for environmental damage as well as personal injury and property damage. Environmental damages would include, at a minimum, response and clean-up costs, restoration costs, and economic losses. The convention would provide compensation for damage caused by a broad range of substances including oils (those not covered under the oil

regimes), bulk liquid cargo, bulk soil cargo, bulk gases, packaged cargo, and flammable residues.

(1) Important questions remain to be decided which include:

Whether the two-tier system is workable and can be implemented with an acceptable balance between equity and practicality; (2) which substances would be included within the scope of the convention's coverage—for purposes of both compensating damage as well as for contributing to the financing of the second-tier fund; (3) how the levy amounts imposed upon cargo would be determined; and (4) how the levies would be collected.

The views of the public, and particularly those of affected maritime commercial and environmental interests, are requested. While the views of the public and affected interests are encouraged on all relevant issues underlying the draft HNS Convention, comment is specifically requested regarding the following subjects: (1) The definition of "HNS" (those substances to which the draft HNS Convention would apply for purposes of shipowner liability as described in document LEG 67/3, Article 1(5)(d)); the definition of "contributing cargo" (those substances to which the draft HNS Convention would apply for purposes of financing the second-international fund as described in document LEG 67/3 Article 1(10)); the definition of shipper (the party responsible for levy payment in Article 1(4)); and the definition of "carriage by sea" (defining when the convention would be applicable in Article 1(9)).

By way of background on the draft convention on Maritime Liens and Mortgages, the April Diplomatic Conference is the culmination of work commenced by an International Subcommittee of the Comite' Maritime Internationale (from 1972 through 1984) and a joint group of experts (JIGE) from IMO and the United Nations Conference on Trade and Development (UNCTAD) to revise the 1967 Convention on Maritime Liens and Mortgages (from 1986 through 1989).

The U.S. Shipping Coordinating Committee discussed the draft Maritime Liens and Mortgages Convention at its last two meetings (September 2, 1992 and November 19, 1992). The March meeting will focus on expectations for the Diplomatic Conference itself and review any papers for the Conference that have been received.

Copies of the draft texts and other relevant documents have been distributed previously by way of regular mailings. Persons requesting to be added to the mailing list should contact Lieutenant Commander Mark Yost or Lieutenant Lee Handford at the telephone/fax number below.

Members of the public are invited to attend the SHC meeting, up to the seating capacity of the room.

For further information or to submit views concerning the SHC meeting, contact either Captain David J. Kantor or Lieutenant Lee Handford, U.S. Coast Guard (G–LMI), 2100 Second Street, SW., Washington, DC 20593, telephone (202) 267–1527, telefax (202) 267–4496. For information or to submit views regarding the draft Maritime Liens and Mortgages Convention, contact Lieutenant Commander Mark J. Yost, U.S. Coast Guard (G–LCL), telephone (202) 267–2245, telefax (202) 267–4163.

Dated: February 10, 1993.

Geoffrey Ogden,

Chairman, Shipping Coordinating Committee.

[FR Doc. 93–3920 Filed 2–18–93; 8:45 am]

BILLING CODE 4710–07–M

TENNESSEE VALLEY AUTHORITY

Paperwork Reduction Act of 1980, as Amended by Public Law 99–591; Information Collection Under Review by the Office of Management and Budget (OMB)

AGENCY: Tennessee Valley Authority.

ACTION: Information collections under review by the Office of Management and Budget (OMB).

SUMMARY: The Tennessee Valley Authority (TVA) has sent to OMB the following proposal for the collection of information under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35), as amended by Public Law 99–591.

Requests for information, including copies of the information collection proposed and supporting documentation, should be directed to the Agency Clearance Officer whose name, address, and telephone number appear below. Questions or comments should be made within 30 days directly to the Agency Clearance Officer and also to the Desk Officer for the Tennessee Valley Authority, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503; Telephone: (202) 395–3084.

Agency Clearance Officer: Mark R. Winter, Tennessee Valley Authority, 1101 Market Street (MR 2F), Chattanooga, TN 37402–2801; (615) 751–2523.

Type of Request: Regular submission.

Title of Information Collection: Federal Financial Assistance Compliance Programs.

Frequency of Use: On occasion.

Type of Affected Public: State or local governments, farms, businesses or other for-profit, non-profit institutions, small businesses or organizations.

Small Businesses or Organizations Affected: Yes.

Federal Budget Functional Category Code: 999.

Estimated Number of Annual Responses: 550.

Estimated Total Annual Burden Hours: 165.

Estimated Average Burden Hours Per Response: .3.

Need For and Use of Information: TVA organizations' compliance officers conduct pre-award reviews of all TVA assistance contracts to ensure compliance with title VI of the Civil Rights Act of 1964, section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and title IX of the Education Amendments of 1972.

John J. O'Donnell,

Vice President, Facilities Services.

[FR Doc. 93–3910 Filed 2–18–93; 8:45 am]

BILLING CODE 8120–08–M

DEPARTMENT OF TRANSPORTATION

Notice of Order Adjusting; International Cargo Rate Flexibility Level

Policy Statement PS–109, implemented by Regulation ER–1322 of the Civil Aeronautics Board and adopted by the Department, established geographic zones of cargo pricing flexibility within which certain cargo rate tariffs filed by carriers would be subject to suspension only in extraordinary circumstances.

The Standard Foreign Rate Level (SFRL) for a particular market is the rate in effect on April 1, 1982, adjusted for the cost experience of the carriers in the applicable ratemaking entity. The first adjustment was effective April 1, 1983. By Order 92–12–20, the Department established the currently effective SFRL adjustments.

In establishing the SFRL for the two-month period beginning February 1, 1993, we have projected non-fuel costs based on the year ended September 30, 1992 data, and have determined fuel prices on the basis of the latest available experienced monthly fuel cost levels as reported to the Department.

By Order 93–2–31 cargo rates may be adjusted by the following adjustment factors over the April 1, 1982 level:

Atlantic	1.2655
Western hemisphere	1.1993
Pacific	1.5881

For further information contact: Keith A. Shangraw (202) 366–2439.

By the Department of Transportation:
February 11, 1993.

Patrick V. Murphy,

Acting Assistant Secretary for Policy and International Affairs.

[FR Doc. 93–3840 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–62–M

Federal Aviation Administration

Receipt of Noise Compatibility Program and Request for Review; Glynco Jetport, Brunswick, GA

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice.

SUMMARY: The Federal Aviation Administration (FAA) announces that it is reviewing a proposed noise compatibility program that was submitted for Glynco Jetport under the provisions of title I of the Aviation Safety and Noise Abatement Act of 1979 (Pub. L. 96–193) (hereinafter referred to as "the Act") and 14 CFR part 150 by Glynn County Airport Commission. This program was submitted subsequent to a determination by FAA that associated noise exposure maps submitted under 14 CFR part 150 for Glynco Jetport were in compliance with applicable requirements effective February 4, 1993. The proposed noise compatibility program will be approved or disapproved on or before August 3, 1993.

EFFECTIVE DATE: The effective date of the start of FAA's review of the noise compatibility program is February 4, 1993. The public comment period ends April 5, 1993.

FOR FURTHER INFORMATION CONTACT: Mrs. Catherine Nelmes, 1680 Phoenix Parkway, suite 101, Atlanta, Georgia 30349, telephone number (404) 994–5306. Comments on the proposed noise compatibility program should also be submitted to the above office.

SUPPLEMENTARY INFORMATION: This notice announces that the FAA is reviewing a proposed noise compatibility program for Glynco Jetport which will be approved or disapproved on or before August 3, 1993. This notice also announces the availability of this program for public review and comment.

An airport operator who has submitted noise exposure maps that are found by FAA to be in compliance with the requirements of Federal Aviation Regulations (FAR) part 150, promulgated pursuant to title I of the Act, may submit a noise compatibility program for FAA approval which sets forth the measures the operator has taken or proposes for the reduction of existing noncompatible uses and for the prevention of the introduction of additional noncompatible uses.

The FAA has formally received the noise compatibility program for Glynco Jetport effective on February 4, 1993. It was requested that the FAA review this material and that the noise mitigation measures to be implemented jointly by the airport and surrounding communities, be approved as a noise compatibility program under section 104(b) of the Act. Preliminary review of the submitted material indicates that it conforms to the requirements for the submittal of noise compatibility programs, but that further review will be necessary prior to approval or disapproval of the program. The formal review period, limited by law to a maximum of 180 days, will be completed on or before August 3, 1993.

The FAA's detailed evaluation will be conducted under the provisions of 14 CFR part 150, § 150.33. The primary considerations in the evaluation process are whether the proposed measures may reduce the level of aviation safety, create an undue burden in interstate or foreign commerce, or be reasonably consistent with obtaining the goal of reducing existing noncompatible land uses and preventing the introduction of additional noncompatible land uses.

Interested persons are invited to comment on the proposed program with specific reference to these factors. All comments, other than those properly addressed to local land use authorities, will be considered by the FAA to the extent practicable. Copies of the noise exposure maps, the FAA's evaluation of the maps, and the proposed noise compatibility program are available for examination at the following locations:

Federal Aviation Administration, 800 Independence Avenue, SW., room 617, Washington, DC 20591.

Federal Aviation Administration, Atlanta Airports District Office, 1680 Phoenix Parkway, Suite 101, Atlanta, Georgia 30349.

Mr. Gary Moore, Managing Director, Glynn County Airport Commission, 500 Connole Street, Brunswick, Georgia 31520.

Questions may be directed to the individual named above under the heading, **FOR FURTHER INFORMATION CONTACT.**

Issued in Atlanta, Georgia, February 4, 1993.

Thomas M. Roberts,

Assistant Manager, Planning and Program Development.

[FR Doc. 93–3952 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–M

Aviation Rulemaking Advisory Committee

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of Aviation Rulemaking Advisory Committee renewal.

SUMMARY: Notice is hereby given of the renewal of the Aviation Rulemaking Advisory Committee. The Administrator is the sponsor of the committee, which will consist of members appointed by the Administrator as representatives of a broad spectrum of the aviation community. The committee will provide the aviation public a means by which to have its interests in aviation safety rulemaking taken into consideration in the development of regulatory actions. The committee will provide the FAA with the benefit of obtaining the input of affected parties before a proposal is ever issued, thus enabling the agency to produce better documents. The functions of the committee are solely advisory.

The Secretary of Transportation has determined that the information and use of the committee are necessary in the public interest in connection with the performance of duties imposed on the FAA by law. Meetings of the committee and executive committee will be open to the public except as authorized by section 10(d) of the Federal Advisory Committee Act.

FOR FURTHER INFORMATION CONTACT: Office of Rulemaking (ARM–1), 800 Independence Avenue, SW., Washington, DC 20591, Telephone: 202–267–9677.

Issued in Washington, DC, on February 9, 1993.

Chris A. Christie,

Executive Director, Aviation Rulemaking Advisory Committee.

[FR Doc. 93–3954 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–M

Aviation Rulemaking Advisory Committee Meeting on Air Traffic Issues

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of meeting.

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of the FAA's Aviation Rulemaking Advisory Committee on air traffic issues.

DATES: The meeting will be held on March 4, 1993, at 9:30 a.m.

ADDRESS: The meeting will be held at the Helicopter Association International, 1619 Duke Street, Alexandria, VA.

FOR FURTHER INFORMATION CONTACT: Mr. Aaron Boxer, Air Traffic Rules and Procedures Service, Federal Aviation Administration, telephone: 202–267–8783.

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92–463; 5 U.S.C. app. II), notice is hereby given of a meeting of the Aviation Rulemaking Advisory Committee on air traffic issues to be held on March 4, 1993, at the Helicopter Association International, 1619 Duke Street, Alexandria, VA. The agenda for this meeting will include:

- Status of the recommendation to the FAA from the Unmanned Airspace Vehicle working group;
- Status of the recommendation to the FAA from the Pilot Procedures at Non-towered Airports working group;
- Status of the Mode S ground sensor evaluation study; and
- A status of the request to assign the Mode C veil petition to the subcommittee.

Attendance is open to the interested public but will be limited to the space available. The public may present written statements to the subcommittee at any time by providing 30 copies to the Assistant Executive Director, or by bringing the copies to him at the meeting. Arrangements may be made by contacting the person listed under the heading "**FOR FURTHER INFORMATION CONTACT.**"

Issued in Washington, DC, on February 11, 1993.

Aaron Boxer,

Assistant Executive Director for Air Traffic, Aviation Rulemaking Advisory Committee.

[FR Doc. 93–3953 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–M

Intent to Rule on Application to Impose and Use a Passenger Facility Charge (PFC) at Pangborn Memorial Airport, Wenatchee, WA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of intent to rule on application.

SUMMARY: The FAA proposes to rule and invites public comment on the application to impose and use a PFC at Pangborn Memorial Airport under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Pub. L. 101–508) and part 158 of the Federal Aviation Regulations (14 CFR part 158).

DATES: Comments must be received on or before March 22, 1993.

ADDRESS: Comments on this application may be mailed or delivered in triplicate to the FAA at the following address: J. Wade Bryant, Manager, Seattle Airports District Office, SEA–ADO, Federal Aviation Administration, 1601 Lind Avenue SW., Suite 250, Renton, WA 98055–4056.

In addition, one copy of any comments submitted to the FAA must be mailed or delivered to Mr. Colin A. Clarke, Airport Manager, at the following address: One Pangborn Drive, East Wenatchee, Washington 98802.

Air carriers and foreign air carriers may submit copies of written comments previously provided to the Ports of Chelan and Douglas Counties under § 158.23 of part 158.

FOR FURTHER INFORMATION CONTACT: Ms. Mary Vargas, (206) 227–2660; Seattle Airports District Office, SEA–ADO; Federal Aviation Administration; 1601 Lind Avenue SW., Suite 250; Renton, Washington 98055–4056. The application may be reviewed in person at this same location.

SUPPLEMENTARY INFORMATION: The FAA proposes to rule and invites public comment on the application to impose and use a PFC at Pangborn Memorial Airport, under the provisions of the Aviation Safety and Capacity Expansion Act of 1990 (Title IX of the Omnibus Budget Reconciliation Act of 1990) (Pub. L. 101–508) and part 158 of the Federal Aviation Regulations (14 CFR part 158).

On February 10, 1993, the FAA determined that the application to impose and use the revenue from a PFC submitted by the Ports of Chelan & Douglas Counties was substantially complete within the requirements of § 158.25 of part 158. The FAA will approve or disapprove the application, in whole or in part, no later than May 29, 1993.

The following is a brief overview of the application.

Level of the proposed PFC: $3.00

Proposed charge effective date: August 1, 1993

Proposed charge expiration date: September 30, 1995

Total estimated PFC revenue: 280,500.00

Brief description of proposed project: Reimbursement of bond funds used to finance the eligible portion of construction of the new terminal complex.

Class or classes of air carriers which the public agency has requested not be required to collect PFCs: None.

Any person may inspect the application in person at the FAA office listed above under "**FOR FURTHER INFORMATION CONTACT**" and at the FAA regional Airports office located at: Federal Aviation Administration, Northwest Mountain Region, Airports Division, ANM–600, 1601 Lind Avenue SW., Suite 540, Renton, WA 98055–4056.

In addition, any person may, upon request, inspect the application, notice and other documents germane to the application in person at the Pangborn Memorial Airport.

Issued in Renton, Washington on February 10, 1993.

Matthew J. Cavanaugh,

Acting Manager, Airports Division, Northwest Mountain Region.

[FR Doc. 93–3955 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–M

Federal Railroad Administration

Petition for Waiver for Test Program

In accordance with 49 CFR 211.51, notice is hereby given that the Federal Railroad Administration (FRA) has received a request for a waiver of compliance with certain requirements of the federal safety laws and regulations in order to conduct a test program. The individual petition is described below, including the parties seeking relief, the regulatory provisions involved, the nature of the relief being requested and the petitioner's arguments in favor of relief.

Massachusetts Bay Transportation Corporation

Docket No. H–93–2

The Massachusetts Bay Transportation Authority (MBTA), along with its contract operator, the National Railroad Passenger Corporation (Amtrak), has petitioned the Federal Railroad Administration (FRA) for a temporary waiver of compliance with certain requirements of 49 CFR part 232, Railroad Power Brakes and Drawbars, in order to conduct a test.

The MBTA is seeking relief from 49 CFR section 232.1, Power brakes, minimum percentage, which states in part: * * * All railroads used in interstate commerce, as required by the Safety Appliance Act, as amended March 2, 1903, any train is operated with power or train brakes, not less than 85 percent of the cars of such train shall have their brakes used * * * and from 49 CFR section 232.12(d)(2), Initial terminal road train air brake tests, which states in part * * * [when the brakes are applied] Inspection of the train brakes must then be made to determine if brakes are applied on each car * * *

The MBTA plans to conduct a series of tests on a Kawasaki Rail Car bilevel passenger coach, MBTA 1719, to determine the operating characteristics of the number 2 truck. The passenger coach has been fitted with a special instrumented truck and wheel sets in order to determine wheel to rail static and dynamic characteristics. MBTA says that the test equipment is extremely sensitive which is the reason for its request to operate MBTA 1719 with the air brake equipment on the number two truck disconnected (cut-out). The MBTA 1719 would only be operated in this manner in non-revenue service and only during the testing.

The test project is originating from the Boston Engine Terminal with specific tests to be run along lines emanating from that point. The location of the tests are as follows:

Lowell Line—from Boston Engine Terminal to Lowell Station

Shore Line—from South Station to Providence

West Cambridge non-Revenue Service Test Track (Switch at M.P. 5.57 of the Fitchburg Line to non-revenue track newly constructed).

During the tests on the Lowell and Shore Lines, the MBTA 1719 will be the control car of a train made up of seven (7) coaches and one (1) locomotive. Maximum speed of this test is proposed to be normal service speed. The tests at the West Cambridge Non-Revenue Service Test track is proposed to be conducted with the MBTA 1719 as part of a train with two (2) coaches and one (1) locomotive and the maximum speed is planned to be 15–20 mph. All testing is anticipated to be performed between February 14, 1993 and March 10, 1993. Any additional testing beyond March 10 would be outlined in a supplemental request.

MBTA states that the safety of the operations will not be compromised by this waiver. The FRA will permit the test to begin during the comment period, and it will be allowed to continue unless opposition from any interested party is received.

Interested parties are invited to participate in these proceedings by submitting written views, data, or comments. FRA does not anticipate scheduling a public hearing in connection with these proceedings since the facts do not appear to warrant a hearing. If any interested party desires an opportunity for hearing, they should notify FRA, in writing, before the end of the comment period and specify the basis for their request.

All communications concerning these proceedings should identify the appropriate docket number (e.g., FRA Docket No. H–93–2) and must be submitted in triplicate to the Docket Clerk, Office of Chief Counsel, Federal Railroad Administration, Nassif Building, 400 Seventh Street, SW., Washington, DC 20590.

Communications received before March 13, 1993 will be considered by FRA before final action is taken. Comments received after that date will be considered as far as practicable. All written communications concerning these proceedings are available for examination during regular business hours (9 a.m.–5 p.m.) in room 8201, Nassif Building, 400 Seventh Street, SW., Washington, DC 20590.

Issued in Washington, DC on February 11, 1993.

Phil Olekszyk,

Deputy Associate Administrator for Safety.

[FR Doc. 93–3861 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–06–M

Petition for Waivers of Compliance

In accordance with 49 CFR 211.9 and 211.41, notice is hereby given that the Federal Railroad Administration (FRA) has received a request for a waiver of compliance with certain requirements of the Federal safety laws and regulations. The petition is described below, including the regulatory provisions involved, the nature of the relief being requested and the petitioner's arguments in favor of relief.

The Tri County Commuter Rail Authority

FRA Docket Number SA–92–3

The Tri County Commuter Rail Authority (TCCX) seeks a waiver of compliance from certain sections of 49 CFR part 231, Railroad Safety Appliance Standards. The TCCX is requesting that it be permitted to operate ten "GO Transit" bi-level commuter passenger cars which do not comply with § 231.14 "Passenger-train cars without platforms."

The intermediate tread of the sill step does not allow for sufficient clearance as required by § 231.14(b)(2). There is also an obstruction by a plastic condensate pipe.

The handbrake handles at certain locations have a very small clearance so that the handbrake cannot be safely operated as required by § 231.14(a)(2).

The securement of the side door vertical handhold is secured with 5/16 inch bolts, whereas the FRA standards require ½ inch bolts or rivets.

The vertical handhold at the side corners are in excess of 24 inches above the top of the centerline of the coupler as required by § 231.14(c)(3)(ii).

FRA Docket Number RSGM–92–23

The TCCX seeks a one year temporary waiver of compliance with certain provisions of the Safety Glazing Standards (49 CFR part 223) for ten passenger cars. The cars, which will be leased from GO Transit, are equipped with safety glass. TCCX is requesting a temporary waiver pending the securement of a purchase agreement with GO Transit, at which time FRA certified glazing will be installed.

The TCCX now operates 30 daily (M–F), 18 Saturday, and 10 Sunday scheduled passenger commuter passenger trains on that portion of the CSX Transportation (CSXT), Atlanta Division, Miami Subdivision, which extends 66.4 miles from West Palm Beach (MP SX 969.9) to Miami, Florida (MP SX 1036.3). This section of trackage is owned by the Florida Department of Transportation and maintained by CSXT.

Due to the devastation caused by Hurricane Andrew there has been a demographic shift in TCCX's ridership since August 24, 1992. This shift has created capacity restraints on the present fleet of 15 trailer coaches and 6 cab cars. In order to provide continued reliable service and meet mandated inspections and servicing, the waivered equipment will be utilized as a maintenance rotational set to protect service and allow for timely servicing of the remaining 5 trainsets. If approval is granted TCCX will operate the waivered equipment in dedicated service which will not be intermingled with the remaining five sets of equipment. A transportation and mechanical bulletin will be issued to all employees addressing this equipment.

Interested parties are invited to participate in these proceedings by submitting written reviews, data, or comments. FRA does not anticipate scheduling a public hearing in connection with these proceedings since the facts do not appear to warrant a hearing. If any interested party desires an opportunity for oral comment, they should notify FRA, in writing, before the end of the comment period and specify the basis for their request.

All communications concerning these proceedings should identify the appropriate docket number (e.g., Waiver Petition Docket Number's—SA–92–3, RSGM–92–23, and must be submitted in triplicate to the Docket Clerk, Chief Counsel, Federal Railroad Administration, Nassif Building, 400 Seventh Street, SW., Washington, DC 20590. Communications received before

March 13, 1993 will be considered by FRA before final action is taken. Comments received after that date will be considered as far as practicable. All written communications concerning these proceedings are available for examination during regular business hours (9 a.m.–5 p.m.) in room 8201, Nassif Building, 400 Seventh Street SW., Washington, DC 20590.

Issued in Washington, DC on February 12, 1993.

Grady C. Cothen, Jr.,

Associate Administrator for Safety.

[FR Doc. 93–3863 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–06–M

[BS–AP–No. 3174]

Union Pacific Railroad Co.; Public Hearing

The Union Pacific Railroad Company has petitioned the Federal Railroad Administration (FRA) seeking approval of the proposed discontinuance and removal of the automatic block signal system on the single main track, between Osawatomie, Kansas, milepost 335.0 and Herington, Kansas, milepost 451.5 on the Hoisington Subdivision; consisting of the discontinuance and removal of 106 automatic block signals, the retention of 4 automatic block signals as operative approach signals, and the removal of the high water detector at milepost 340.4.

This proceeding is identified as FRA Block Signal Application Number 3174.

The FRA has issued a public notice seeking comments of interested parties and has conducted a field investigation in this matter. After examining the carrier's proposal and the available facts, the FRA has determined that a public hearing is necessary before a final decision is made on this proposal.

Accordingly, a public hearing is hereby set for 10 a.m. on Thursday, March 25, 1993, at Memorial Hall, located at 11th and Main Streets, in Osawatomie, Kansas 66064. Interested parties are invited to present oral statements at the hearing.

The hearing will be an informal one and will be conducted in accordance with Rule 25 of the FRA Rules of Practice (49 CFR part 211.25), by a representative designated by the FRA.

The hearing will be a nonadversary proceeding and, therefore, there will be no cross-examination of persons presenting statements. The FRA representative will make an opening statement outlining the scope of the hearing. After all initial statements have been completed, those persons wishing to make brief rebuttal statements will be given the opportunity to do so in the same order in which they made their initial statements. Additional procedures, if necessary for the conduct of the hearing, will be announced at the hearing.

Issued in Washington, DC on February 11, 1993.

Phil Olelszyk,

Deputy Associate Administrator for Safety.

[FR Doc. 93–3864 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–06–M

[BS–AP–Nos. 3197 and 3209]

Burlington Northern Railroad Co., Public Hearing

The Burlington Northern Railroad Company has petitioned the Federal Railroad Administration (FRA) seeking approval of the proposed discontinuance and removal of the traffic control system on the single main track, between Appleton, Minnesota, milepost 578.93 and Ortonville, Minnesota, milepost 602.2, on the Dakota Division, 12th Subdivision, a distance of approximately 23 miles and approval of the proposed discontinuance and removal of the traffic control and automatic block signal system on the single main track, between Stateline, milepost 602.2 and Mobridge, South Dakota, milepost 805.1, on the Dakota Division, 12th Subdivision and between Mobridge, milepost 805.1 and Terry, Montana, milepost 1078.9, on the Montana Division, 27th Subdivision, a distance of approximately 477 miles; including the conversion of control points "Aberdeen" and "Big Stone" to remote controlled interlockings.

These proceedings are identified as FRA Block Signal Application Numbers 3197 and 3209 respectively.

The FRA has issued a public notice seeking comments of interested parties and is conducting a field investigation in this matter. After examining the carrier's proposal and the available facts, the FRA has determined that a public hearing is necessary before a final decision is made on this proposal.

Accordingly, a public hearing is hereby set for 10 a.m. on Thursday, April 22, 1993, at the Best Western Ramkota Inn, located at 1400 8th Avenue NW., Aberdeen South Dakota. Interested parties are invited to present oral statements at the hearing.

The hearing will be an informal one and will be conducted in accordance with Rule 25 of the FRA Rules of Practice (49 CFR part 211.25), by a representative designated by the FRA.

The hearing will be a nonadversary proceeding and, therefore, there will be no cross-examination of persons presenting statements. The FRA representative will make an opening statement outlining the scope of the hearing. After all initial statements have been completed, those persons wishing to make brief rebuttal statements will be given the opportunity to do so in the same order in which they made their initial statements. Additional procedures, if necessary for the conduct of the hearing, will be announced at the hearing.

Issued in Washington, DC on February 11, 1993.

Phil Olelszyk,

Deputy Associate Administrator for Safety.

[FR Doc. 93–3859 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–06–M

Application for Approval of Discontinuance or Modification of a Railroad Signal System or Relief From the Requirements of 49 CFR Part 236

Pursuant to 49 CFR part 235 and 49 U.S.C. app. 26, the following railroads have petitioned the Federal Railroad Administration (FRA) seeking approval for the discontinuance or modification of the signal system or relief from the requirements of 49 CFR part 236 as detailed below.

Block Signal Application (BS–AP)–No. 3215

Applicant: Duluth Missabe and Iron Range Railway Company, Mr. W.H. Harrison, Chief Engineer, 329 Second Street, Proctor, Minnesota 55810–1091.

The Duluth Missabe and Iron Range Railway Company seeks approval of the proposed discontinuance and removal of the traffic control system on the Wye track, near milepost 51.0, at Colby Yard, on the Iron Range Division, near Aurora, Minnesota; consisting of the discontinuance and removal of three controlled signals and the conversion of one power-operated switch to hand operation.

The reason given for the proposed changes is the termination of natural ore shipments have resulted in low traffic volume.

BS–AP–No. 3216

Applicant: CSX Transportation, Mr. W. J. Scheerer, Chief Engineer—Train Control, 500 Water Street, Jacksonville, Florida 32202.

CSX Transportation seeks approval of the proposed modification of the traffic control system on the single main track

between South Sellers, milepost A275.5 and WN, milepost S156.9, South Carolina, on the Florence Division, South End Subdivision; consisting of the discontinuance and removal of two controlled signals and the relocation of two automatic signals.

The reason given for the proposed changes is to eliminate a set of hold out signals no longer needed for present day operation.

BS–AP–No. 3217

Applicant: Union Pacific Railroad Company, Mr. P.M. Abaray, Chief Engineer—Signals, 1416 Dodge Street, room 920, Omaha, Nebraska 68179.

The Union Pacific Railroad Company seeks approval of the proposed modification of the traffic control system on the main track, between Craig Junction, Texas, milepost 235.9, Austin Subdivision and milepost 112.4, San Antonio Subdivision, on the San Antonio Division; consisting of the conversion of one power-operated switch to hand operation, the conversion of four controlled signals (6SA, 6SB, 6NA, and 6NB) to automatic signals, and the conversion of the traffic control system between Craig Junction and milepost 112.4 to an automatic block signal system.

The reason given for the proposed changes is to improve operations.

BS–AP–No. 3218

Applicant: Southeastern Pennsylvania Transportation Authority, Mr. John LaForce, P.E., Assistant Chief Engineer Power, Signals and Communications, 200 West Wyoming Avenue, Philadelphia, Pennsylvania, 19140.

The Southeastern Pennsylvania Transportation Authority seeks approval of the proposed modification of the signal system, on the main tracks, between CP Valley, milepost 4.0 and Cynwyd, milepost 6.1, on the Ivy Ridge Line, near Philadelphia, Pennsylvania; consisting of the conversion of the traffic control system to an automatic block signal system.

The reason given for the proposed changes is that the installation will permit greater efficiency and flexibility in operations.

BS–AP–No. 3219

Applicant: New Orleans Public Belt Railroad, Mr. A. C. Marinello, Jr., Manager Engineering and Maintenance, P.O. Box 51658, New Orleans, Louisiana 70151–1658.

The New Orleans Public Belt Railroad seeks approval of the proposed modification of the signal system on the two main tracks between milepost J3.3 and milepost J8.3, near New Orleans, Louisiana; consisting of the discontinuance and removal of 8 automatic signals and 1 controlled signal and the installation of electronic coded track circuits and 16 automatic signals.

The reason given for the proposed changes is to renew, refurbish and improve the original installation by providing a safer, simplified and modern system for improved train handling and operation.

BS–AP–No. 3220

Applicant: Union Pacific Railroad Company, Mr. P. M. Abaray, Chief Engineer—Signals, 1416 Dodge Street, room 920, Omaha, Nebraska 68179.

The Union Pacific Railroad Company seeks approval of the proposed reduction to the limits of North and South Tower Interlockings (Browder, milepost 215.6 and Terminal Junction, milepost 214.8), on the Ft. Worth Division, Dallas Subdivision, near Dallas Texas; consisting of the removal of six power-operated switches (54, 73, 67, 6, 1, and 3), the removal of nine controlled signals (L80, LA78, LB78, L70, RA10, RB10, RC10, R12, and L10), and the installation of controlled signal L60.

The reason given for the proposed changes is to improve operations.

BS–AP–No. 3221

Applicants: Southern Pacific Transportation Company, Mr. J. A. Turner, Engineer—Signals, Southern Pacific Building, One Market Plaza, San Francisco, California 94105.

Atchison, Topeka and Santa Fe Railway Company, Mr. W. S. Seery, Director Signal Systems, System Communications and Signal Building, 4515 Kansas Avenue, Kansas City, Kansas 66106.

The Southern Pacific Transportation Company (SP) and the Atchison, Topeka and Santa Fe Railway Company jointly seek approval of the proposed modification of the traffic control system on the single main track, near milepost 349.0, Woodford, California, on the SP Tehachapi Division, Mohave District, Bakersfield Line; consisting of the conversion of power-operated switch (49) to hand operation and the discontinuance and removal of three controlled signals (50L, 50RA, and 50RB).

The reason given for the proposed changes is that train operation is such that the power switch is no longer needed and operations will be improved.

BS–AP–No. 3222

Applicant: Burlington Northern Railroad Company, Mr. W. G. Peterson, Chief Engineer—Control Systems, 9401 Indian Creek Parkway, P. O. Box 29136, Overland Park, Kansas 66201–9136.

The Burlington Northern Railroad Company seeks approval of the proposed discontinuance and removal of S. E. Junction Interlocking milepost 7.2, on the River Division, Cuba and River Subdivisions, and the discontinuance and removal of the automatic block signal system on the main track between milepost 7.4 and milepost 9.0 on the River Subdivision, near St. Louis, Missouri; consisting of the conversion of one power-operated switch to hand operation, the discontinuance and removal of three controlled signals (2L, 2RA, and 2RB), and the conversion of controlled signals 12R and 134R to automatic signals.

The reason given for the proposed changes is that the location is no longer needed due to local traffic volume and changes to train operations over the years.

BS–AP–No. 3223

Applicant: Burlington Northern Railroad Company, Mr. W. G. Peterson, Chief Engineer—Control Systems, 9401 Indian Creek Parkway, P. O. Box 29136, Overland Park, Kansas 66201–9136.

The Burlington Northern Railroad Company seeks approval of the proposed discontinuance and removal of the automatic block signal system on the single main track, between Moore, milepost 5.1 and Gunn, Minnesota, milepost 805.1, on the Dakota Division, 6th Subdivision, a distance of approximately 26.2 miles, and operate movements over the trackage by Track Warrant Control Rules.

The reason given for the proposed changes is that reduced traffic patterns do not justify the high cost to maintain the aging signal system.

BS–AP–No. 3224

Applicant: CSX Transportation, Mr. W.J. Scheerer, Chief Engineer—Train Control, 500 Water Street, Jacksonville, Florida 32202.

CSX Transportation seeks approval of the proposed modification of "SRO" Interlocking, milepost CFP109.8, on the Baltimore Division, RF&P Subdivision, near Arlington, Virginia; consisting of the discontinuance and removal of one power-operated derail.

The reason given for the proposed change is to eliminate a power-operated derail no longer needed for present day operation.

BS–AP–No. 3225

Applicant: CSX Transportation, Mr. W.J. Scheerer, Chief Engineer—Train Control, 500 Water Street, Jacksonville, Florida 32202.

CSX Transportation seeks approval of the proposed modification of traffic control system on the single main track between Dalton, milepost WA99.3 and Tunnel Hill, Georgia, milepost WA106.7, on the Corbin Division, W&A Subdivision; consisting of the discontinuance and removal of two controlled signals (80R and 80L) and four automatic signals (105–5, 105–6, 103–1 and 103–2) and the relocation of two automatic signals (104.3 and 101.9).

The reason given for the proposed changes is to eliminate a set of hold out signals no longer needed for present day operation.

BS–AP–No. 3226

Applicant: Dallas, Garland and Northeastern Railroad Company, Mr. Edwin E. Ellis, General Manager, 425 N. Fifth Street, Garland, Texas 75040.

The Dallas, Garland and Northeastern Railroad Company seeks approval of the proposed modification of the signal system at Tower 19 Zone "C" and Lamar Street Interlockings, between milepost 51.8 and milepost 52.7, near Dallas, Texas, on the old Atchison Topeka and Santa Fe Railway Company's Dallas District, Southern Region; consisting of the following:

1. The discontinuance and removal of controlled signals 62, 79, 80, 81, 81A, 85, 96, 97, 103, 109, 112, 112A, and 112B at Lamar Street Interlocking;

2. The discontinuance and removal of power-operated switches 92, 94, 94X, 99, and 104 at Lamar Street Interlocking;

3. The discontinuance and removal of controlled signals 10RA, 10RB, 10L, 12R, 12L, 14R, 14L, 44R, 44L, 46R, 46L, 48R, 48L, 52R, 52L, 54R, 54L, and 47 at Tower 19 Zone "C" Interlocking;

4. The discontinuance and removal of power-operated switches 45, 45X, 49, 49X, and 51 at Tower 19 Zone "C" Interlocking; and

5. The removal of switch lock 47 at Tower 19 Zone "C" Interlocking and the installation of a manual-operated gate at SP crossing at "Old Tower 10".

The reason given for the proposed changes is that the controlled signals and switches are no longer needed due to the discontinued through train operations in the area and the sale of the right of way to the Dallas Area Rapid Transit Authority.

Rules Standards & Instructions Application (RS&I–AP)–No. 1062 Reconsideration

Applicant: Burlington Northern Railroad Company, Mr. W.G. Peterson, Chief Engineer—Control Systems, 9401 Indian Creek Parkway, P.O. Box 29136, Overland Park, Kansas 66201–9136.

The Burlington Northern Railroad Company seeks relief from § 236.23 of the Rules, Standards, and Instructions (49 CFR part 236) to the extent that a single white light is used as an indicator to inform train crews that they should remain clear of grade crossings, while waiting for the dispatcher to line a route for conflicting train movements.

The applicant's justification for relief: For the good of the motoring public and the installation of wayside train signals in lieu of these "indicators" is not warranted from either a safety, train operations, or legal standpoint.

RS&I–AP–No. 1036

Applicant: Burlington Northern Railroad Company, Mr. W.G. Peterson, Chief Engineer—Control Systems, 9401 Indian Creek Parkway, P.O. Box 29136, Overland Park, Kansas 66201–9136.

The Burlington Northern Railroad Company (BN) seeks relief from § 235.5 of 49 CFR part 235, Instructions Governing Applications for Approval of a Discontinuance or Material Modification of a Signal System or Relief from the Requirements of part 236; to the extent that BN be allowed to install, relocate, and remove wayside intermediate signals when done to facilitate the installation of electronic coded track circuits to replace pole mounted signal circuits, without filing an application.

The applicant's justification for relief: Such applications waste valuable resources within both the FRA and the BN, delaying pole line elimination projects that improve safety of train operations.

Any interested party desiring to protest the granting of an application shall set forth specifically the grounds upon which the protest is made, and contain a concise statement of the interest of the protestant in the proceeding. The original and two copies of the protest shall be filed with the Associate Administrator for Safety, FRA, 400 Seventh Street, SW., Washington, DC 20590 within 45 calendar days of the date of issuance of this notice. Additionally, one copy of the protest shall be furnished to the applicant at the address listed above.

FRA expects to be able to determine these matters without oral hearing. However, if a specific request for an oral hearing is accompanied by a showing that the party is unable to adequately present his or her position by written statements, an application may be set for public hearing.

Issued in Washington, DC on February 11, 1993.

Phil Olekszyk,

Deputy Associate Administrator for Safety.

[FR Doc. 93–3860 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–06–M

National Highway Traffic Safety Administration

[Docket No. 92–49; Notice 2]

Blue Bird Body Company; Grant of Petition for Determination of Inconsequential Noncompliance

Blue Bird Body Company (Blue Bird) of Fort Valley, Georgia, determined that some of its vehicles are equipped with seats that fail to comply with 49 CFR 571.222, "School Bus Passenger Seating—Crash Protection" (Federal Motor Vehicle Safety Standard (FMVSS) No. 222), and filed an appropriate report pursuant to 49 CFR part 573. Blue Bird also petitioned to be exempted from the notification and remedy requirements of the National Traffic and Motor Vehicle Safety Act (15 U.S.C. 1381 *et seq.*) on the basis that the noncompliance was inconsequential as it relates to motor vehicle safety.

Notice of receipt of the petition was published on October 5, 1992, and an opportunity afforded for comment (57 FR 45863). This notice grants that petition.

During the period of November 1, 1984, to April 28, 1992, Blue Bird manufactured 2,250 Micro Bird school buses, with a gross vehicle weight rating (GVWR) of 10,000 pounds or less, which may have passenger seat back heights less than 20 inches above the seating reference point. Paragraph S5.1.2 Seat Height and Surface Area requires that the seat back height on each school bus passenger seat be at least 20 inches above the seating reference point.

Blud Bird supported its petition for inconsequential noncompliance with the following:

Based on data provided on page 32 of a compliance test performed by NHTSA (Report No. 222/210/208–MSE–92–01–TR92037–01), the average height of the eight seats in the (Blue Bird Micro Bird School bus) was 19.84 inches above the seating reference point. This is only 0.16 inch (less than 1 percent) below the 20 inch requirement of section 5.1.2. Blue Bird Body Company sincerely believes that the noncompliance discussed

herein is inconsequential as it relates to motor vehicle safety because the discrepancy in seat back height is so small.

School buses with a GVWR of 10,000 pounds or less are required to have seat belts that meet FMVSS 208, 209, and 210. These small school buses, therefore, rely on occupant restraint systems rather than on compartmentalization for occupant protection. Since these small school buses are not required to meet the seat spacing and barrier requirements of compartmentalization and are equipped with seat belts at all designated seating positions (Blue Bird believes) that have seats with seat back heights slightly below the (seating reference point) plus 20 inches dimension is not a safety related noncompliance.

No comments were received on the petition.

After receiving the petition, NHTSA asked Blue Bird whether the eight seats measured by the agency were representative of the total population of Micro Bird buses. The company replied, indicating that measurements had been taken on three additional buses at the plant, and that no seat back height was less than 19.5 inches above the seating reference point. Measurements were also taken on four additional buses in the field, with seat back heights of 19.75 to 19.875 inches recorded. In Blue Bird's opinion, the seat back stops on the affected buses have a lower limit such that no seat back height less than 19.5 inches could occur.

The original purpose of the seat back height requirement was to protect children from whiplash injuries incurred as a result of rear impact collision. However, since data on school bus accidents did not indicate a significant whiplash problem, the agency concluded that a minimum 20-inch seat back height would provide adequate crash protection. In evaluating the merits of this petition, the agency examined more recent data, which were collected in the National Accident Sampling System (NASS) for the years 1982 through 1986. (NASS does not differentiate between smaller school buses and other vans after 1986). There was one report of a person of student age who had an Abbreviated Injury Scale (AIS) 1 level (minor) neck injury. This indicates that the minor deviation of seat back height represented by the Micro Birds is not likely to have any consequential effect upon safety.

Further, as the petitioner noted, school buses with a GVWR of 10,000 pounds or less are required to have seat belts, and, therefore, rely on occupant restraint systems for occupant protection rather than compartmentalization. The Micro Birds were all equipped with all seat belts required by Standard No. 208.

Accordingly, in consideration of the foregoing, it is hereby found that the petitioner has met its burden of persuasion that the noncompliance herein described is inconsequential as it relates to motor vehicle safety, and its petition is granted.

Authority: 15 U.S.C. 1417; delegations of authority at 49 CFR 1.50 and 49 CFR 501.8.

Issued: February 12, 1993.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 93-3941 Filed 2-18-93; 8:45 am]

BILLING CODE 4910-59-M

[Docket No. 92-56; Notice 2]

General Motors; Grant of Petition for Determination of Inconsequential Noncompliance

General Motors (GM) of Warren, Michigan, determined that some of its vehicles failed to comply with the labeling requirements of 49 CFR 571.105, Federal Motor Vehicle Safety Standard No. 105, "Hydraulic Brake Systems," and filed an appropriate report pursuant to 49 CFR part 573. GM also petitioned to be exempted from the notification and remedy requirements of the National Traffic and Motor Vehicle Safety Act (15 U.S.C. 1381 *et seq.*) on the basis that the noncompliance was inconsequential as it related to motor vehicle safety.

Notice of receipt of the petition was published on October 21, 1992 (FR 48079), and an opportunity afforded for comment. This notice grants that petition.

In Standard No. 105, Paragraph S5.4.3 *Reservoir labeling* states that "[e]ach vehicle shall have a brake fluid warning statement that reads as follows, in letters at least one-eighth of an inch high: 'WARNING, Clean filler cap before removing. Use only—fluid from a sealed container. (Inserting the recommended type of brake fluid as specified in 49 CFR 571.116, e.g. 'DOT3'). The lettering shall be * * * (b) [l]ocated so as to be visible by direct view, either on or within four inches of the brake fluid reservoir filler plug or cap."

During the model years 1984 through 1992, GM manufactured 239,392 'P' Series motor home chassis that may not comply with the labeling requirements of Standard No. 105, especially after motor home manufacturers add bodies. The brake fluid warning statement required by Standard No. 105 is present, but may not be "located so as to be visible by direct view" as required. The information is embossed on the brake fluid reservoir cap. The brake fluid reservoir itself is mounted under the floor of the chassis on the driver's side of the engine. An access hole is provided in the splash adjacent to the reservoir to allow the brake fluid level to be checked and replenished as necessary. However, depending on whether the chassis is placed on a hoist for service, the design of the completed motor home, and the diligence of the person attempting to read the warning statement, a varying number of words comprising the warning statement may be obscured from "direct view."

GM supports its petition for inconsequential noncompliance with the following:

Due to the nature of the vehicle and the location of the brake fluid reservoir, brake system service work on motor homes is typically performed by trained service personnel. The typical nature of motor home construction, including the chassis, is such that the brake fluid reservoir is not conspicuously located for casual inspection. Inspection and servicing of the brake fluid on the subject vehicles is best accomplished with the vehicle on a hoist, frequently with a wheel and/or body component removed, depending on the design of the final stage manufacturer's completed motor home. These factors contribute to the likelihood that this brake service will be performed by trained personnel. By virtue of their training and experience, such people are familiar with the information provided on the brake fluid warning statement. That is, service technicians know to avoid contaminating the inside of the reservoir, and to add the correct type of brake fluid when necessary.

The information contained on the brake fluid reservoir cap is also provided in the service manuals for the subject vehicles.

As required by FMVSS 105, sufficient brake fluid is provided to operate the brakes across the range from a new lining, fully retracted position to a fully worn, fully applied position. Since brake fluid is not consumed in use, the only necessity to check or add fluid arises from either a leak in the brake system or when the system has to be evacuated to replace worn brakes. Due to the relatively obscure location of the reservoir, the frequency at which the reservoir cap is removed for reasons other than these two is extremely low. With respect to these two events (system leak and worn out brakes), it is highly likely that whoever is capable of repairing the brake system or replacing the friction surfaces would use the

correct fluid and know to avoid contamination.

The brake fluid warning statement contains two pieces of information. One of these is: "Use only (DOT designation) fluid from a sealed container." With regard to this information, we note that it is not possible to add brake fluid to the reservoir until after the reservoir cap has been removed. After the cap has been removed, the statement is "visible by direct view" given that the person servicing the brake fluid would be holding the reservoir cap which contains the statement. We believe this noncompliance is especially inconsequential to motor vehicle safety with respect to the portion of the warning statement that specifies the type of brake fluid that should be added.

The other piece of information contained in the warning statement is: "WARNING, Clean filler cap before removing."

GM states that this statement is unnecessary if the area around the reservoir cap is clean, and that the statement may be illegible to the extent that the area around the reservoir cap is dirty (because the dirt itself can conceal the statement). GM believes that this anomaly in the FMVSS 105 requirement is not of practical concern, however, since virtually anyone with the wherewithal to check and add brake fluid in these vehicles will also have sufficient understanding to avoid contaminating the inside of the reservoir.

GM has no record of any owner complaints related to the lack of viability of the brake fluid warning statement, nor any complaints of brake fluid contamination in the subject vehicles.

No comments were received on the petition.

GM has attempted to minimize the effects of the noncompliance by stating that "[a]fter the cap has been removed, the statement is 'visible by direct view' given that the person servicing the brake fluid would be holding the reservoir cap which contains the statement." Clearly, the warning to clean the cap before removing is of such a nature that it must be read before the cap is removed, and compliance with S5.4.3 must be judged with the filler cap in place.

It is not critical that the advisory to use DOT 3 brake fluid be read before the cap is removed. Further, the effects of GM's failure to comply with this requirement of S5.4.3 appear to present only minimal safety problems. There remains to be considered the effect upon safety of the fact that the advisory to clean the filler cap before removing cannot be read until after the cap has been removed. GM has made a plausible argument that the configuration of the motor home and chassis, and its servicing, are so complex that brake fluid replacement ordinarily will be performed with equipment not ordinarily available to the usual owner of a motor home (a hoist), and that this service will be performed by trained personnel who are familiar with the necessity to avoid contamination of the fluid. NHTSA also notes that the information contained on the filler cap is also available in the service manuals for the motor homes.

Accordingly, the petitioner has met its burden of persuasion that the noncompliance herein described is inconsequential as it relates to motor vehicle safety, and its petition is granted.

Authority: 15 U.S.C. 1417; delegations of authority at 49 CFR 1.50 and 49 CFR 501.8.

Issued: February 12, 1993.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 93–3939 Filed 2–18–93; 8:45 am]

BILLING CODE 4910-59-M

Research and Special Programs Administration

[Docket No. WPDA–2; Notice No. 93–1]

City of New York: Application for Waiver of Preemption Concerning Transportation of Radioactive Materials

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice of availability of study and request for comments.

SUMMARY: This is a proceeding to consider the application of the City of New York for a waiver of statutory preemption under the Hazardous Materials Transportation Act of the City's ordinance that effectively bans the transportation of certain radioactive materials through City limits. A study on the issue, entitled "Support for the U.S. Department of Transportation Response in the New York City Radioactive Materials Routing Case," has been conducted for RSPA, and RSPA is inviting comment on the study and other aspects of this proceeding.

DATES: Comments received on or before April 20, 1993. and rebuttal comments filed on or before June 21, 1993, will be considered before an administrative decision is issued by the Associate Administrator for Hazardous

Materials Safety, RSPA. Rebuttal comments may discuss only those issues raised by comments during the initial comment period and may not raise new issues.

ADDRESSES: New York City's application, the study, and any comments received may be reviewed in the Dockets Unit, Research and Special Programs Administration, room 8421, Nassif Building, 400 Seventh Street, SW., Washington, DC 20590–0001 (telephone 202–366–4453). Comments and rebuttal comments may be submitted to the Dockets Unit at the above address, and should include the Docket Number (WPDA–2). Three copies of each comment should be submitted. A copy of each comment and rebuttal comment must also be sent to: (a) Susan M. Kath, Esq., Assistant Corporation Counsel, City of New York, 100 Church Street, room 326H, New York, NY 10007; (b) Mindy A. Buren, Esq., EEI–UWASTE, Shaw, Pittman, Potts & Trowbridge, 2300 N Street, NW., Washington, DC 20037; and (c) Cornelius F. Tuohy, Esq., Assistant Attorney General, State of Connecticut, 55 Elm Street, Hartford, CT 06106. A certification that a copy has been sent to each person must also be included with the comment. (The following format is suggested: "I hereby certify that copies of this comment have been sent to Ms. Kath, Ms. Buren, and Mr. Tuohy at the addresses specified in the Federal Register.")

A copy of the study, which is entitled "Support for the U.S. Department of Transportation. Response in the New York City Radioactive Materials Routing Case," is available upon request from the Office of Hazardous Materials Planning and Analysis, room 8108, (202) 366–4484, 400 Seventh St., SW., Washington, DC 20590–0001.

FOR FURTHER INFORMATION CONTACT: Mary M. Crouter, Special Counsel, Office of the Chief Counsel (DCC–3), Research and Special Programs Administration, 400 Seventh Street, SW., Washington, DC 20590–0001, telephone 202–366–4400.

SUPPLEMENTARY INFORMATION:

Background

In 1976, the City of New York (City) adopted an ordinance that effectively bans the transportation of certain radioactive materials, including spent nuclear fuel, through the City. The City's ordinance is preempted by section 112(a) of the Hazardous Materials Transportation Act (HMTA) (49 app. U.S.C. 1811(a)).

The City filed an application with the Department seeking a nonpreemption determination (now referred to as waiver of preemption) in accordance with 49 app. U.S.C. 1811(d). The

Department denied the application, and the City sought judicial review of that decision in the United States District Court for the Southern District of New York. In a December 8, 1988 decision, the Court vacated the Department's decision and remanded the matter to the Department for a new decision. *City of New York* v. *DOT*, 700 F. Supp. 1294 (S.D.N.Y. 1988).

The Department reopened the record on March 28, 1989 (54 FR 12732), to allow the filing of comments to update and supplement the record. At the City's request, the Department postponed further consideration of the application to allow the City to supplement the record in response to several points raised by the Department in correspondence dated March 23, 1989.

In June 1990, the City filed a response to that correspondence, and on July 16, 1990, the Department invited public comment on the City's new submission (55 FR 28982). The comment period closed August 15, 1990. On September 5, 1990, at the request of the State of Connecticut, RSPA extended the comment period until October 5, 1990.

In order to fully evaluate the City's application, RSPA contracted with ICF incorporated to conduct a study of the City's safety analysis of proposed routes to be used to transport radioactive material around, instead of through, the City. In doing its analysis, the City used the Department of Transportation's Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials. During the preparation of the ICF study, an error was discovered in the guidelines. On July 2, 1992, RSPA published a notice discussing the error in the Guidelines, and a method for correcting the error (57 FR 29557).

In addition, since the City's application was originally filed, other developments have occurred that are directly relevant to this matter. In 1990, RSPA amended the Hazardous Materials Regulations, 49 CFR 177.825(b)(2), to provide that a motor vehicle containing highway route controlled quantity (HRCQ) radioactive materials must transport those materials directly from pickup points to preferred routes and directly from preferred routes to delivery points using a shortest distance criterion. 55 FR 19210, May 8, 1990. The City's analysis of its proposed alternative routes was conducted prior to the 1990 rule changes. In addition, one of the alternative routes analyzed by the City included a segment (Connecticut State Route 2) that was neither an Interstate System highway nor a State-designated route selected by a State routing agency in accordance with 49 CFR 177.825(b)(1).

On July 2, 1992 (57 FR 29556), RSPA announced that it was conducting a study on the issue, including the study of an alternative route selected in accordance with 49 CFR 177.825(b), and would reopen the comment period when the study was completed.

In the July 2, 1992 notice, RSPA also observed that the HMTA had been amended in 1990 by the Hazardous Materials Transportation Uniform Safety Act, Public Law 101–615. On February 28, 1991, RSPA amended its regulations to convert its existing procedures for inconsistency rulings and non-preemption determinations to procedures for preemption and waiver of preemption determinations. 56 FR 8616. On May 13, 1992, RSPA further amended its procedures for preemption and waiver of preemption determinatons by streamlining the appellate process. 57 FR 20424. Under the new procedures, RSPA has provided that a petition for reconsideration may be filed with the Associate Administrator for Hazardous Materials Safety. Because these developments occurred after the 1988 remand of this matter to the Department for a new decision, RSPA announced that it intended to apply the new standards and procedures for making waiver of preemption determinations to this proceeding. As a result, this proceeding, previously identified as Docket NPDA–2, is now Docket WPDA–2 (Waiver of Preemption Determination Application No. 2).

Study

ICF Incorporated has now completed the study for RSPA. The study, which is entitled, "Support for the U.S. Department of Transportation Response in the New York City Radioactive Materials Routing Case," consists of an Executive Summary and three volumes. Volume I is a technical analysis of a safety analysis by Arthur D. Little, Inc., which was commissioned by the City to support its application. Volume II is a routing risk analysis of three alternative routes from Brookhaven National Laboratories on Long Island to the Department of Energy reprocessing plant in Idaho, using the DOT Guidelines methodology as revised in the August 1992 edition. Volume III is an examination of the City's ordinance to determine whether its restriction on radioactive materials shipments poses an unreasonable burden on commerce.

Public Comment

Comments are requested on the City's application and supporting documentation, and on the study conducted for RSPA by ICF Incorporated. Comments should specifically address the following issues: (1) Whether the specified City ordinance affords an equal or greater level of protection to the public than is afforded by the requirements of the HMTA or regulations issued under the HMTA; (2) whether that ordinance does not unreasonably burden commerce, and (3) whether RSPA should grant the waiver request if it makes affirmative findings on issues (1) and (2).

Because of the extensive lapse of time since the City filed its application in 1984, the considerable changes in Federal and State laws and regulations since that time, and the recently-completed study, RSPA is limiting the record on which the decision will be based to the following:

(1) The City's application and supporting documentation, memoranda, and correspondence.

(2) Comments, memoranda, and other documents, including the ICF study and comments received in response to this notice, that are or have been filed in the docket since 1988, when the District Court remanded the decision to the Department.

A commenter who wishes to rely upon or reference a comment submitted prior to January 1, 1989, must submit an additional copy of the earlier document, or clearly identify the earlier document by date, author, and title. The commenter also must explain the relevance of the earlier document.

Persons intending to comment on the application should review the standards and procedures governing the Department's consideration of applications for waiver of preemption determinations found at 49 CFR 107.215–107.223.

Issued in Washington, DC on February 5, 1993.

Alan I. Roberts,

Associate Administrator for Hazardous Materials Safety.

[FR Doc. 93–3866 Filed 2–18–93; 8:45 am]

BILLING CODE 4910-60-M

UNITED STATES INFORMATION AGENCY

University Development Program in Business Management for Selected Countries in Central and Eastern Europe

AGENCY: United States Information Agency.

ACTION: Notice—request for proposals.

SUMMARY: Subject to the availability of funds, The Bureau of Educational and Cultural Affairs of the United States Information Agency invites applications from accredited U.S. educational institutions to conduct exchange programs with selected post-secondary educational institutions in Albania, Bulgaria, Croatia, Czech Republic, Slovak Republic, Macedonia, Hungary, Poland, Romania and Slovenia to develop curricula and teaching methodologies for foreign faculties in the field of business management.

DATES: Deadline for proposals: Proposals must be received at the U.S. Information Agency by 5 p.m. Washington, DC time on Friday, April 23, 1993. Proposals received by the Agency after this deadline will not be eligible for consideration. Faxed documents will not be accepted, nor will documents which are postmarked on April 23, 1993, but received at a later date. It is the responsibility of all grant applicants to ensure that their proposals are received by the above deadline. Grants should begin not later than October 1, 1993, and must be a minimum of one semester and a maximum of one year in length. Priority will be given to programs with an early start date.

ADDRESS: The original and 14 complete copies of the proposal should be submitted by the deadline to: U.S. Information Agency, Ref.: University Development in Business Management for Eastern and Central Europe, Office of Grants Management, E/XE, room 357, 301 4th St., SW., Washington, DC 20547.

CONTACTS FOR FURTHER INFORMATION: For general information and requests for application packets, which include all necessary forms and guidelines for preparing budgets as well as award criteria additional to this announcement, those interested should telephone Ms. Robin Kline or Ms. Deborah Trent at (202) 619–5289, or write to either of them at the following address: Specialized Programs Unit, Office of Academic Programs, U.S. Information Agency, 301 4th Street, SW., room 349, Washington, DC 20547.

SUPPLEMENTARY INFORMATION: Overall authority for these exchanges is contained in the Mutual Educational and Cultural Exchange Act of 1961, as amended, Public Law 87–256 (Fulbright-Hays Act). The purpose of the Act is "to enable the Government of the United States to increase mutual understanding between the people of the United States and people of other countries by means of educational and cultural exchange; to strengthen the ties which unite us with other nations by demonstrating the educational and cultural interests, developments, and achievements of the people of the United States and other nations * * * and thus to assist in the development of friendly, sympathetic, and peaceful relations between the United States and other countries of the world."

Pursuant to the legislation authorizing the Bureau of Educational and Cultural Affairs, programs must maintain a non-political character and should be balanced and representative of the diversity of American political, social and cultural life. Programs shall also "maintain their scholarly integrity and shall meet the highest standards of academic excellence or artistic achievement."

Public Reporting Burden—Public reporting burden for this collection of information is estimated to average 30 hours per response, including the time for reviewing instructions, searching existing data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden estimate, to USIA Clearance Officer, M/ADD, room 624, U.S. Information Agency, 301 4th Street, SW., Washington, DC 20547; and to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Washington, DC 20503.

(Information collection involved in this program has been cleared by OMB Approval Number 3116–0179, expiration date 12/31/95.)

Overview

Recent dramatic changes in Central and Eastern Europe provide an historic opportunity to contribute to the region's successful transition to a free market economy. Under the auspices of the U.S. assistance program for Central and Eastern Europe, USIA is offering this program to help foster greater expertise in business management in selected states of the region.

The specific purpose of this program is to assist Central and East European countries in their transformation to free market economies through the development of business management training capabilities in selected academic institutions. In an effort to make the program more responsive to the needs of the countries, programs will be focused on key institutions [identified by U.S. Information Service (USIS) posts] which have had limited contact with the U.S. and wish to develop linkages with U.S. institutions or with key institutions whose existing or past linkages we wish to further develop. Therefore, proposals that are extensions or enhancements of past or current relationships with a partner institution will be acceptable.

[**Note:** A list of foreign partner institutions to which priority will be given is available with the application package and guidelines.]

Guidelines

Eligibility

Institutions

In the U.S., participation in the program is open to accredited two-year and four-year colleges and universities, including graduate schools. Consortia of universities and/or community colleges, individually or as systems, are also eligible. Each partnership which includes one or more U.S. community college must be led by a four-year institution. U.S. colleges and universities or consortia applying under this program may collaborate with U.S. scholarly, professional, or international educational associations and organizations. Proposals from a consortium may be submitted by a single member institution with authority to represent the consortium. Overseas, participation is limited to recognized degree-granting institutions of higher education and internationally recognized and highly regarded independent research institutes.

Special Note—The Agency encourages proposals from eligible Historically Black Colleges and Universities (HBCUs) and other institutions in the U.S. with significant minority student enrollment. Consortia of universities including such institutions are also strongly encouraged to apply.

Institution Representatives

Participants representing the U.S. institution, traveling under funding from this grant, must be U.S. citizens. Participants representing the foreign institution must be citizens, nationals, or permanent residents of the eligible foreign country in which the foreign partner institution is located.

Grant Activities

Grant activities must include placement of U.S. faculty at Central and East European institutions for in-country training of foreign faculty and for development of sustainable programs to educate future foreign business management teachers and business people. Targeted program activities may include: Faculty development and enrichment; curriculum design; modernization of the administrative structures within the foreign institution; outreach to the private sector; and direct teaching.

Components for the development of university-to-private sector linkages and the development of appropriate materials are encouraged. Orientation, seminar, workshop and semester-long course formats will be acceptable. Visits to partner institutions by staff or consultants to plan joint projects may be funded under this grant but should be a relatively small part of the overall exchange. An important goal of the program is to create enduring linkages between the designated foreign institutions and U.S. universities. Preference will be given to proposals in which a U.S. faculty member is placed at the foreign partner institutions for at least an academic semester.

Courses developed may include, but are not limited to, marketing, production management, economics, industrial relations, finance, accounting, and international business. Proposals should provide for a two-way exchange; however, preference will be given to programs in which the majority of the grant activity occurs at the foreign institution.

Ineligibility

A proposal will be deemed technically ineligible if:

1. It does not fully adhere to the guidelines established herein and in the application packet, including budgetary requirements.

2. The applicant is not an accredited U.S. four-year college or university;

3. The project does not constitute a direct partnership with a post-secondary business management program in Albania, Bulgaria, Croatia, the Czech Republic, the Slovak Republic, Hungary, Macedonia, Poland, Romania or Slovenia;

4. The project involves partnerships in more than one country;

5. The project does not seek to address the faculty, curriculum, and administrative aspects entailed in developing the business management program identified;

6. The project does not provide for in-country presence of American faculty; or

7. The project includes profits or fee.

Proposed Budget

Project awards to the U.S. institutions will be made in a range of amounts but will not exceed $200,000. USIA anticipates awarding from six to ten grants in amounts ranging from $50,000 to $200,000. The Agency reserves the right to reduce, increase or otherwise modify proposal budgets in accordance with the needs of the program. For organizations with less than four years of experience in international exchange activities, grants will be limited to a maximum of $60,000. All organizations must submit a comprehensive line item budget, the details and format of which are contained in the application packet.

Allowable Costs

Program Costs

1. International travel (via U.S. flag carriers);

2. Domestic travel;

3. Maintenance (including lodging, meals and incidental expenses);

4. Educational materials (including books, reference materials, computers, costs related to workshops, seminars, etc.);

5. Honoraria or compensation for in-country work, which must not exceed $150 per day per person.

6. Visa fees; and

7. Limited medical insurance for foreign participants during U.S. visits.

*Administrative Costs—Not To Exceed 20% of the Requested Budget**

1. Salaries and benefits;

2. Communications (e.g. fax, telephone, postage);

3. Office Supplies;

4. Other Direct Costs; and

5. Indirect Costs based on administrative and non-participant program expenses. [Please refer to the Application Package.]

Application should demonstrate substantial cost-sharing (dollar and in-kind) in both program and administrative expenses, including overseas partner contributions. No grants funded under this program will include profit or fee.

*Please Note: The amount of administrative funds requested should not exceed 20 percent of the total amount requested, including administrative expenses for orientation and indirect costs applied to administrative and program costs. Administrative expenses should be cost-shared.

Institutional Commitment

In making award decisions, USIA will focus especially on evidence of an ongoing commitment by the U.S. partner to internationalizing its educational programs as well as a commitment by both partner institutions to the success of this particular exchange program. Each proposal must include documentation of institutional support for the proposed program in the form of signed letters of endorsement from the president, chancellor, or director of the U.S. and foreign institution(s) involved. The documentation may also be submitted in the form of a signed agreement by the same persons. Each agreement or letter of endorsement must describe the institution's commitment to an on-going partnership and make specific reference to the proposed program and how it will fit into and be supported by the institution's current activities in internationalizing its educational programs. Proposals should comment on how the partnership might be continued beyond the period of the grant award. Documentation of support from foreign institutions must be received by 5 p.m. Washington, DC time on May 7, 1993, addressed to Robin Kline or Deborah Trent, E/ASU, room 349, U.S. Information Agency, 301 4th Street SW., Washington, DC 20547. Organizations not submitting foreign institutional commitment documentation with the original proposal must describe in the proposal measures taken to secure the documentation by May 7. Applicant institutions are expected to make their own arrangements with the appropriate foreign institutions regarding institutional commitment.

Review Process

USIA will acknowledge receipt of all proposals and will review them for technical eligibility. Eligible proposals will be forwarded to panels of USIA officers for advisory review. All eligible proposals will also be reviewed by the appropriate geographic area office, and the budget and contracts offices. Proposals may also be reviewed by the Agency's Office of General Counsel. Funding decisions are at the discretion of the Associate Director for Educational and Cultural Affairs. Final technical authority for grant awards resides with USIA's contracting officer.

Review Criteria

Technically eligible applications will be competitively reviewed according to the following criteria:

a. Quality of program plan—including academic rigor, thorough conception of project, potential to address partner needs, understanding of the needs of the partner institution, and proposed follow-up.

b. Feasibility of the program plan and the capacity of the organization to conduct the exchange; e.g., qualifications of program staff and participants, commitment of the institution's administration to internationalizing its faculty outlook and curricula.

Each proposal should clearly demonstrate how the institution will meet the program objectives and execute the program plan.

c. Track record—relevant Agency and outside assessments of the

organization's experience with international exchanges; for organizations that have not worked with USIA, the demonstrated potential to achieve program goals will be evaluated.

d. Multiplier effect/impact—the impact of the exchange activity on the wider community and on the establishment of continuing ties, as well as the contribution of the proposed activity in promoting mutual understanding.

e. Value to U.S.-partner country relations—the assessment by USIA's geographic area office of the potential impact and significance of the project with the partner country.

f. Cost effectiveness—greatest return on each grant dollar; degree of cost-sharing exhibited.

g. Adherence of proposed activities to the criteria and conditions described above.

h. Institutional commitment as demonstrated by financial and in-kind support of the program.

i. Follow-on Activities—each proposal should provide a plan for follow-on activity (without USIA support) which ensures that the USIA-supported program is not an isolated event. Each proposal must clearly demonstrate long-term commitment from all partners.

j. Evaluation plan—proposals should provide a plan for evaluation by the grantee institution.

Options for Renewal

Subject to the availability of funding in FY 1994 and satisfactory program implementation, USIA may invite selected grantees to submit proposals for renewals of current grants.

Notice

The terms and conditions published in this RFP are binding and may not be modified by any USIA representative. Explanatory information provided by the Agency that contradicts published language will not be binding. Issuance of the RFP does not constitute an award commitment on the part of the Federal Government. Final award cannot be made until funds have been fully appropriated by Congress, allocated and committed through internal USIA procedures.

Notification

All applicants will be notified of the results of the review process on or about July 30, 1993. Awarded grants will be subject to periodic reporting and evaluation requirements.

Dated: February 12, 1993.

Barry Fulton,

Acting Associate Director, Bureau of Educational and Cultural Affairs.

[FR Doc. 93–3852 Filed 2–18–93; 8:45 am]

BILLING CODE 8230–01–M

Sunshine Act Meetings

Federal Register
Vol. 58, No. 32
Friday, February 19, 1993

This section of the FEDERAL REGISTER contains notices of meetings published under the "Government in the Sunshine Act" (Pub. L. 94-409) 5 U.S.C. 552b(e)(3).

COMMODITY FUTURES TRADING COMMISSION

TIME AND DATE: 2 p.m., Thursday, February 25, 1993.

PLACE: 2033 K St., NW., Washington, DC, 8th Floor Conference Room.

STATUS: Closed.

MATTERS TO BE CONSIDERED: Judicial Session.

CONTACT PERSON FOR MORE INFORMATION: Jean A. Webb, 254–6314.

Jean A. Webb,

Secretary of the Commission.

[FR Doc. 93–4021 Filed 2–17–93; 10:50 am]

BILLING CODE 6351–01–M

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice of Agency Meeting

Pursuant to the provisions of the "Government in the Sunshine Act" (5 U.S.C. 552b(e)(2)), notice is hereby given that at 10:03 a.m. on Tuesday, February 16, 1993, the Board of Directors of the Federal Deposit Insurance Corporation met in closed session to consider the following:

Application of FirstWest Bank, Glendive, Montana, an insured State nonmember bank, for consent to purchase certain assets of and to assume certain liabilities of Richey National Bank, Richey, Montana, and for consent to establish the sole office of Richey National Bank as a branch of the resultant bank.

Request for a review of previous denials of a bank's requests for relief from reimbursement under the Truth in Lending Simplification and Reform Act.

Recommendation regarding the Corporation's corporate and liquidation activities.

Matters relating to the Corporation's resolution activities.

In calling the meeting, the Board determined, on motion of Director Stephen R. Steinbrink (Acting Comptroller of the Currency), seconded by Director Jonathan L. Fiechter (Acting Director, Office of Thrift Supervision), concurred in by Acting Chairman Andrew C. Hove, Jr., that Corporation business required its consideration of the matters on less than seven days' notice to the public; that no earlier notice of the meeting was practicable; that the public interest did not require consideration of the matters in a meeting open to public observation; and that the matters could be considered in a closed meeting by authority of subsections (c)(2), (c)(4), (c)(6), (c)(8), (c)(9)(A)(ii), (c)(9)(B), and (c)(10) of the "Government in the Sunshine Act" [5 U.S.C. 552b (c)(2), (c)(4), (c)(6), (c)(8), (c)(9)(A)(ii), (c)(9)(B), and (c)(10)).

The meeting was held in the Board Room of the FDIC Building located at 550 17th Street, NW., Washington, DC.

Dated: February 16, 1993.

Federal Deposit Insurance Corporation.

Robert E. Feldman,

Deputy Executive Secretary.

[FR Doc. 93–3999 Filed 2–16–93; 4:40 pm]

BILLING CODE 6714–01–M

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice of Agency Meeting

Pursuant to the provisions of the "Government in the Sunshine Act" (5 U.S.C. 552b), notice is hereby given that the Federal Deposit Insurance Corporation's Board of Directors will meet in open session at 10 a.m. on Tuesday, February 23, 1993, to consider the following matters:

Summary Agenda:

No substantive discussion of the following items is anticipated. These matters will be resolved with a single vote unless a member of the Board of Directors requests that an item be moved to the discussion agenda.

Disposition of minutes of previous meetings.

Reports of actions approved by the standing committees of the Corporation and by officers of the Corporation pursuant to authority delegated by the Board of Directors.

Discussion Agenda:

Memorandum and resolution re: Proposed Federal Financial Institutions Examination Council policy statement concerning money laundering which would encourage domestic banking offices to include in electronic funds transfer messages, to the extent possible, customer information suggested by the Financial Action Task Force.

Memorandum and resolution re: Final amendments to Part 325 of the Corporation's rules and regulations, entitled "Capital Maintenance," regarding presold residential construction loans.

Memorandum and resolution re: Proposed amendments to Part 346 of the Corporation's rules and regulations, entitled "Foreign Banks," which would set forth application procedures for the Corporation's permission for an insured state branch to engage in, or continue, an activity which is not permissible for a federal branch.

Memorandum re: Corporation's Strategic Plan.

The meeting will be held in the Board Room on the sixth floor of the FDIC Building located at 550 17th Street NW., Washington, DC.

The FDIC will provide attendees with auxiliary aids (e.g., sign language interpretation) required for this meeting. Those attendees needing such assistance should call (202) 898–6745 (Voice); (202) 898–3509 (TTY), to make necessary arrangements.

Requests for further information concerning the meeting may be directed to Mr. Hoyle L. Robinson, Executive Secretary of the Corporation, at (202) 898–6757.

Dated: February 16, 1993.

Federal Deposit Insurance Corporation.

Hoyle L. Robinson,

Executive Secretary.

[FR Doc. 93–4000 Filed 2–16–93; 4:40 pm]

BILLING CODE 6714–01–M

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice of Agency Meeting

Pursuant to the provisions of the "Government in the Sunshine Act" (5 U.S.C. 552b), notice is hereby given that at 10:30 a.m. on Tuesday, February 23, 1993, the Federal Deposit Insurance Corporation's Board of Directors will meet in closed session, by vote of the Board of Directors, pursuant to sections 552b (c)(2), (c)(4), (c)(6), (c)(8), (c)(9)(A)(ii), (c)(9)(B), and (c)(10) of Title 5, United States Code, to consider the following matters:

Summary Agenda:

No substantive discussion of the following items is anticipated. These matters will be resolved with a single vote unless a member of the Board of Directors requests that an item be moved to the discussion agenda.

Matters relating to the Corporation's corporate and supervisory activities.

Recommendations with respect to the initiation, termination, or conduct of administrative enforcement proceedings (cease-and-desist proceedings, termination-of-insurance proceedings, suspension or removal proceedings, or assessment of civil money penalties) against certain insured depository institutions or officers, directors, employees, agents or other persons participating in the conduct of the affairs thereof:

Names of persons and names and locations of depository institutions authorized to be

exempt from disclosure pursuant to the provisions of subsections (c)(6), (c)(8), and (c)(9)(A)(ii) of the "Government in the Sunshine Act" (5 U.S.C. 552b (c)(6), (c)(8), (c)(9)(A)(ii)).

Note: Some matters falling within this category may be placed on the discussion agenda without further public notice if it becomes likely that substantive discussion of those matters will occur at the meeting.

Discussion Agenda:

Matter relating to the possible closing of certain insured depository institutions:

Names and locations of depository institutions authorized to be exempt from disclosure pursuant to the provisions of subsections (c)(8), (c)(9)(A)(ii), and (c)(9)(B) of the "Government in the Sunshine Act" (5 U.S.C. 552b (c)(8), (c)(9)(A)(ii), and (c)(9)(B)).

Personnel actions regarding appointments, promotions, administrative pay increases, reassignments, retirements, separations removals, etc.:

Names of employees authorized to be exempt from disclosure pursuant to the provisions of subsections (c)(2) and (c)(6) of the "Government in the Sunshine Act" (5 U.S.C. 552b (c)(2) and (c)(6)).

The meeting will be held in the Board Room on the sixth floor of the FDIC Building located at 550 17th Street NW., Washington, DC.

Requests for further information concerning the meeting may be directed to Mr. Hoyle L. Robinson, Executive Secretary of the Corporation, at (202) 898–6757.

Dated: February 16, 1993.

Federal Deposit Insurance Corporation.

Hoyle L. Robinson,

Executive Secretary.

[FR Doc. 93–4018 Filed 2–17–93; 10:34 am]

BILLING CODE 6714–01–M

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

TIME AND DATE: 10 a.m., Wednesday, February 24, 1993.

PLACE: Marriner S. Eccles Federal Reserve Board Building, C Street entrance between 20th and 21st Streets, NW., Washington, DC 20551.

STATUS: Closed.

MATTERS TO BE CONSIDERED:

1. Personnel actions (appointments, promotions, assignments, reassignments, and salary actions) involving individual Federal Reserve System employees.
2. Any items carried forward from a previously announced meeting.

CONTACT PERSON FOR MORE INFORMATION: Mr. Joseph R. Coyne, Assistant to the Board; (202) 452–3204. You may call (202) 452–3207, beginning at approximately 5 p.m. two business days before this meeting, for a recorded announcement of bank and bank holding company applications scheduled for the meeting.

Dated: February 16, 1993.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 93–4009 Filed 2–17–93; 9:56 am]

BILLING CODE 6210–01–M

OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION

TIME AND DATE: 10 a.m., Thursday, March 4, 1993.

PLACE: Room 410, 1825 K Street, NW., Washington, DC 20006.

STATUS: Open Meeting.

MATTERS TO BE CONSIDERED: Oral Argument before the Commission in *Wheeling-Pittsburgh Steel Corporation* and *United Steelworkers of America, District 23, Local Union No. 1190;* OSHRC Docket No. 89–3389.

CONTACT PERSON FOR MORE INFORMATION: Patrick Moran, (202) 634–4015.

Dated: February 17, 1993.

Earl R. Ohman, Jr.,

General Counsel.

[FR Doc. 93–4042 Filed 2–17–93; 2:28 pm]

BILLING CODE 7600–01–M

UNITED STATES POSTAL SERVICE BOARD OF GOVERNORS

Notice of a Meeting

The Board of Governors of the United States Postal Service, pursuant to its Bylaws (39 CFR 7.5) and the Government in the Sunshine Act (5 U.S.C. Section 552b), hereby gives notice that it intends to hold a meeting at 1 p.m. on Monday, March 1, 1993, and at 8:30 a.m. on Tuesday, March 2, 1993, in Washington, DC. By telephone vote on February 11, 1993, a majority of the members contacted and voting, the Board of Governors voted to close to public observation its meeting scheduled for March 1, which will involve consideration of temporary changes to the Domestic Mail Classification Schedule as proposed by the Postal Service in Postal Rate Commission Docket No. MC93–2. The Board determined that pursuant to section 552b(c)(3) and (10) of Title 5, United States Code, and section 7.3(c) and (j) of Title 39, Code of Federal Regulations, discussion of this matter is exempt from the open meeting requirement of the Government in the Sunshine Act (5 U.S.C. 552b(b)).

In accordance with section 552b(f)(1) of title 5, United States Code, and section 7.6(a) of title 39, Code of Federal Regulations, the General Counsel of the United States Postal Service has certified that in her opinion the meeting may properly be closed to public observation, pursuant to section 552b(c)(3) and (10) of Title 5, United States Code; and section 7.3(c) and (j) of Title 39, Code of Federal Regulations.

The March 2 meeting is open to the public and will be held at U.S. Postal Service Headquarters, 475 L'Enfant Plaza SW., in the Benjamin Franklin Room. The Board expects to discuss the matters stated in the agenda which is set forth below. Requests for information about the meeting should be addressed to the Secretary of the Board, David F. Harris, at (202) 268–4800.

Agenda

Monday Session

March 1—1:00 p.m. (Open)

1. Consideration of Temporary Changes to the Domestic Mail Classification Schedule as Proposed by the Postal Service in Postal Rate Commission Docket No. MC93–2.

Tuesday Session

March 2—8:30 a.m. (Open)

1. Minutes of the Previous Meeting, February 1–2, 1993
2. Remarks of the Postmaster General and CEO. (Marvin Runyon)
3. Establishment of Committees and Appointment of Members. (Bert H. Mackie, Chairman, Board of Governors)
4. Annual Report on Processing and Distribution. (Peter A. Jacobson, Vice President, Processing and Distribution)
5. Annual Report on Customer Services. (Samuel Green, Jr., Vice President, Customer Services)
6. Tentative Agenda for the April 5–6, 1993, meeting in Washington, DC.

David F. Harris,

Secretary.

[FR Doc. 93–4025 Filed 2–17–93; 11:06 am]

BILLING CODE 7710–12–M

Corrections

Federal Register
Vol. 58, No. 32
Friday, February 19, 1993

This section of the FEDERAL REGISTER contains editorial corrections of previously published Presidential, Rule, Proposed Rule, and Notice documents. These corrections are prepared by the Office of the Federal Register. Agency prepared corrections are issued as signed documents and appear in the appropriate document categories elsewhere in the issue.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

[OIS-019-N]

Medicare and Medicaid Programs; Quarterly Listing of Program Issuances and Coverage Decisions

Correction

In notice document 93-276 beginning on page 3028 in the issue of Thursday, January 7, 1993, make the following correction:

On page 3030, in Table II, under Carriers Manual Part 3, in the second column, in the fourth line, "Completion" should read "Home".

BILLING CODE 1505-01-D

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[AK-932-4210-06; F-88329]

Notice of Proposed Withdrawal and Opportunity for Public Meeting; Alaska

Correction

In notice document 93-2069 beginning on page 6417 in the issue of Thursday, January 28, 1993, make the following corrections:

1. On page 6417, in the 3d column, under the heading "*Parcel 2*", in the 9th line, "N. 60° E.," should read "N. 60° W.," and in the 13th line, insert "close at" after "to".

2. On the same page, in the same column, under the heading "*Parcel 3*", in the fifth line, insert "S." after "Thence,".

BILLING CODE 1505-01-D

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[CO-930-4214-10; COC-54072]

Proposed Withdrawal; Opportunity for Public Meeting; Colorado

Correction

In notice document 92-23882 appearing on page 45639 in the issue of Friday, October 2, 1992, make the following corrections:

1. In the 1st column, in the 1st paragraph, in the 10th line, "mining laws of" should read "mining laws for".

2. In the same column, in land description T. 39 N., R. 9 W.., in the first line, "No. 2" should read "No. 1", and in the fifth line "S. 1°00'37'E.," should read "S. 1°00'37"E.,".

3. In the second column, in land description T. 39 N., R. 9 W., in the fifth line, "3131.00 ft.;" should read "3132.00 ft.;"

BILLING CODE 1505-01-D

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-31763; File No. SR-NASD-91-73]

Self-Regulatory Organizations; National Association of Securities Dealers, Inc.; Order Granting Approval of Proposed Rule Change Relating to Suspension or Cancellation of Membership or Registration for Failure to Comply With Arbitration Awards

Correction

In notice document 93-2358 beginning on page 6829 in the issue of Tuesday, February 2, 1993, make the following correction:

On page 6829, in the first column, insert "January 26, 1993." after the heading.

BILLING CODE 1505-01-D

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-31795; File No. SR-NYSE-93-07]

Self-Regulatory Organizations; Notice of Filing and Immediate Effectiveness of Proposed Rule Change by the New York Stock Exchange, Inc., Relating to Decreases Affecting Transaction Charges, Reduction of the Odd-Lot Specialist Charge and Creation of a New Specialist Charge

Correction

In notice document 93-2767 beginning on page 7281 in the issue of Friday, February 5, 1993, make the following corrections:

On page 7281, in the second column, in the table, two entries were omitted from the 1992 and 1993 columns for the fourth entry. In addition, the footnotes should appear directly beneath the table. The table is correctly printed as follows:

	1992	1993
Transaction charges:		
Charge on floor brokerage commission earned	1.1%	0.0%
Credit on floor brokerage:		
Paid Out	1.2%	1.2%
Give-ups	1.1%	0.0%
*System credit on all executed orders from 100 to 2,099 shares	$0.30	$0.30
*Additional system credit on all individual and Agency executed market orders from 100 to 2,099 shares (I and A orders as defined by the Exchange for audit trail purposes).[4]	—	$1.30
System processing charges:		
Specialist Odd-Lot Charge- per share		
Odd Lots	$0.02	$0.004
Partial Round-Lots	$0.00130	$0.00135
**Specialist system charge per execution of system order on individual and agency market orders from 100 to 2,099 shares		$0.65

[4] Orders with the following descriptions are excluded and not eligible for this credit:

An order of a member or member organization trading as agent for the account of a non-member competing market maker.

Competing Market Maker: A specialist or market maker registered as such on a registered stock exchange (other than the NYSE), or a market-maker bidding and offering over-the-counter, in a NYSE-traded security.

*Combined credits are limited to Total Transaction Charge.

**Total charges levied not to exceed $9 million per annum in aggregate.

BILLING CODE 1505-01-D

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Notice of Intent to Rule on Application To Use the Revenue From a Passenger Facility Charge (PFC) at Capital Airport, Springfield, IL

Correction

In notice document 93-2928 appearing on page 7602 in the issue of Monday, February 8, 1993, in the second column, in the second full paragraph, in the sixth line "effective" should read "expiration" and in the eighth line "$641.056" should read "$641,056".

BILLING CODE 1505-01-D

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Parts 1 and 602

[T.D. 8456]

RIN 1545-AQ14

Capitalization of Certain Policy Acquisition Expenses

Correction

In rule document 92-30943 beginning on page 61813 in the issue of Tuesday, December 29, 1992, make the following corrections:

1. On page 61817, in the first column, in the second and third lines, remove "The net negative foreign capitalization amount."; and in the fourth line, remove "remaining portion of a".

§ 1.848-1 [Corrected]

2. On page 61820, in the second column, in § 1.848-1(h)(2)(vi), in the third line, "of" should read "or".

BILLING CODE 1505-01-D

federal register

Friday
February 19, 1993

Part II

Environmental Protection Agency

40 CFR Part 257 et al.
Standards for the Use or Disposal of Sewage Sludge; Final Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 257, 403 and 503

[FRL–4203–3]

Standards for the Use or Disposal of Sewage Sludge

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: Under authority of Sections 405(d) and (e) of the Clean Water Act (CWA), as amended (33 U.S.C.A. 1251, *et seq.*), the Environmental Protection Agency (EPA) is promulgating regulations to protect public health and the environment from any reasonably anticipated adverse effects of certain pollutants that may be present in sewage sludge. The regulations establish requirements for the final use and disposal of sewage sludge in three circumstances. First, the regulations establish requirements for sewage sludge when the sludge is applied to the land for a beneficial purpose (including sewage sludge or sewage sludge products that are sold or given away for use in home gardens). Second, the regulations establish standards for sludge when the sludge is disposed on land by placing it on surface disposal sites (including sewage sludge-only landfills). Third, the regulations establish requirements for sewage sludge when incinerated. The standards for each end use and disposal practice consist of general requirements, numerical limits on the pollutant concentrations in sewage sludge, management practices and, in some cases, operational requirements. The final rule also includes monitoring, recordkeeping and reporting requirements.

Standards apply to publicly and privately owned treatment works that generate or treat domestic sewage sludge, as well as to any person who uses or disposes of sewage sludge from such treatment works. The rule requires compliance with these standards as expeditiously as possible but no later than 12 months from the date the rule is published, or within 24 months of publication if construction of new pollution control facilities is required to comply with the regulations. The final rule also includes conforming amendments to 40 CFR parts 257 and 403.

DATES: The effective date is March 22, 1993. Additional comments and data will be accepted until May 20, 1993.

The incorporation by reference of certain publications listed in this regulation is approved by the Director of the Federal Register as of May 20, 1993.

ADDRESSES: This Notice is requesting comments and data the Agency will consider for Round Two part 503 rulemaking. Send written comments and data described in this Notice to Round Two Part 503 Sewage Sludge Use and Disposal Rule; Comment Clerk; Water Docket MC–4101; Environmental Protection Agency; 401 M Street, SW; Washington, DC 20460. Respondents are also requested to submit an original and 3 copies of their written information. Respondents who want receipt of their information acknowledged should include a self-addressed, stamped envelope. All submissions must be postmarked or delivered by hand, no facsimiles (faxes) will be accepted.

A copy of the comments and supporting documents cited in the reference section of this Notice are available for review at EPA's Water Docket; 401 M Street, SW.; Washington, DC 20460. The Docket is located in room L–102. For access to Docket materials, call (202) 260–3027 between 9 a.m. and 3:30 p.m. for an appointment. The EPA public information regulation (40 CFR part 2) provides that a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Further information on the part 503 rule may be obtained by writing or calling Dr. Alan Rubin, U.S. Environmental Protection Agency, Office of Water, Sludge Risk Assessment Branch (WH–586), 401 M Street, SW., Washington, DC 20460, (202) 260–1306. Information on the availability of single copies of the final rule, technical support documents, and copies of the data, analyses and models discussed in today's final rule is provided in part XIV of **SUPPLEMENTARY INFORMATION.**

SUPPLEMENTARY INFORMATION: The preamble to this Notice is organized as follows:

Overview
Part I: Generation, Use and Disposal of Sewage Sludge
Part II: Federal and State Requirements
Part III: Selection of Pollutants Considered for Regulation
Part IV: February 6, 1989 Proposed Rule
Part V: November 9, 1990 Notice of Availability of Information and Data, and Anticipated Impacts on Proposed Rule
Part VI: Risk Assessment Methodology
Part VII: Risk Management Approach
Part VIII: Exposure Assessment Methodology and Other Risk Management Issues for Sewage Sludge Use and Disposal Practices for the Final Rule
Part IX: Selection of Pollutants for Regulation
Part X: Aggregate Risk Assessment for the Final Part 503 Regulation
Part XI: Description of the Final 40 CFR Part 503 Regulation
  Subpart A: General Provisions
  Subpart B: Land Application
  Subpart C: Surface Disposal
  Subpart D: Pathogens and Vector Attraction
  Subpart E: Incineration
Part XII: Implementation of 40 CFR Part 503
Part XIII: Benefits and Cost of the Amendments to Parts 257 and 403 and the Final Part 503 Regulation
Part XIV: Availability of Technical Information on the Final Rule
Part XV: Description of the Amendments to 40 CFR Parts 257 and 403

Overview

With the publication of today's rule, EPA has now met its longstanding obligation to promulgate regulations to establish standards for the use and disposal of sewage sludge. EPA's undertaking required an unprecedented effort to assess the potential for pollutants in sewage sludge to affect public health and the environment through a number of different routes of exposure. As a result, EPA's effort, an enormously complex one, has required it to address issues that affect many of the Agency's other major regulatory responsibilities. For example, evaluation of the risks posed by pollutants that may be present in sludge applied to land required the Agency to consider human exposure through inhalation, direct ingestion of soil fertilized with sewage sludge and through consumption of crops grown on this soil, among others. EPA also assessed the potential risk to human health through contamination of drinking water sources or surface water when sludge is disposed of on the land. EPA also evaluated the potential effects directly on crops, on cattle, on surface water aquatic species and wildlife. EPA also evaluated the effect of emissions from sewage sludge incinerators on human health. Thus, development of the sewage sludge regulation had obvious implications for Agency activities under the Clean Air Act, the Resource Conservation and Recovery Act, the Toxic Substances Control Act, the Comprehensive Environmental Response, Compensation and Liability Act and the Safe Drinking Water Act.

Development of this rule presented the Agency with a number of specific challenges in addition to those associated with coordinating these standards with other Agency programs. Not the least of these was assessing the potential for adverse effects on public health and the environment from pollutants in sludge. This is particularly difficult with respect to non-human health effects, given the limited

information available to the Agency in this area. This evaluation was further complicated by the fact that the methods for evaluating non-human health effects are less well-developed than those the Agency has traditionally relied on for evaluating human health effects.

Nevertheless, EPA is confident that the regulations it is promulgating today adequately protect public health and the environment from all reasonably anticipated adverse effects, as required by section 405(d), for several reasons. First, EPA has evaluated its regulations for aggregate national health impact. As explained in more detail below, even given very conservative assumptions that probably overstate exposure, there are virtually no effects when sludge is disposed of on the land or used as a soil conditioner or fertilizer in compliance with these rules. Further, even when sludge is incinerated and the population potentially exposed to the incinerator emissions is greater, the effects are small.

Second, use and disposal of sewage sludge is not new in this country. In the process of developing these regulations, EPA reviewed the available scientific and technical literature for information on sewage sludge. That search did not turn up any evidence that the use of sewage sludge is causing any significant or widespread adverse effects. While anecdotal, this evidence tends to confirm what EPA's risk assessment review showed more scientifically.

Finally, the Agency's sewage sludge assessment effort is not over. This is the first stage of EPA's sewage sludge regulatory program—"Round One." The statute under which these regulations are issued requires the Agency to develop regulations in two steps and to revise these regulations periodically if additional information suggests the need for regulation of other pollutants. The Agency has committed to identifying in May, 1993, the additional pollutants it will consider for regulation in "Round Two" and announcing its schedule for completion of the second stage effort. The Agency is comfortable that the regulations promulgated here are adequately protective because most of the effects that these regulations are designed to prevent are largely chronic, not acute ones. Even in the unlikely event that new information dictates reconsideration of some of the determinations on which EPA has based its health conclusions for this rule, there would be no adverse short-term human health consequences since standards to protect against chronic effects are well below acute effects levels. Moreover, the Agency is committed to an effort that investigates many of the assumptions it used in determining what levels of pollutants in sewage sludge were consistent with broad protection of public health and the environment as discussed below. Based on the results of this study or any new information showing an increased potential for adverse effects on public health, the Agency is prepared to move aggressively to address any problems with sewage sludge use should the evidence warrant.

Clean Water Act

Congress adopted the Clean Water Act (CWA) to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 101(a), 33 U.S.C. 1251(a). To achieve this goal, the CWA prohibits the discharge of pollutants into navigable waters except in compliance with the statute. The CWA directs EPA to promulgate regulations establishing limits on the types and amounts of pollutants discharged from various industrial, commercial, and public sources of wastewater.

Congress recognized that regulating only those sources discharging effluent directly into the nation's waters alone would not sufficiently achieve the CWA's goals. Consequently, the CWA requires EPA to promulgate nationally applicable pretreatment standards which restrict pollutant discharges for those who discharge wastewater indirectly through sewers flowing to publicly owned treatment works (POTWs). Section 307 (b) and (c), 33 U.S.C. 1317 (b) & (c). Generally, these national pretreatment standards are designed to ensure that wastewaters from direct and indirect industrial dischargers are subject to similar levels of treatment. In addition, POTWs are required to implement local treatment limits applicable to their industrial indirect dischargers to satisfy any local requirements. 40 CFR 403.5.

Direct dischargers must comply with effluent limitations in National Pollutant Discharge Elimination System ("NPDES") permits; indirect dischargers must comply with pretreatment standards. These limitations and standards are established by regulation for categories of industrial dischargers and are based on the degree of control that can be achieved using various levels of pollution control technology. In addition, pretreatment standards must be established for those pollutants which are not susceptible to treatment by POTWs or which would interfere with POTW operations. CWA Sections 301(b), 304(b), 306, 307 (b)–(d), 33 U.S.C. 1311(b), 1314(b), 1316, and 1317 (b)–(d).

POTWs receive wastewater from industrial facilities, domestic wastes from private residences, and run-off from various sources that must be treated prior to discharge. Treatment results in an effluent that may be discharged and a residual material, sewage sludge. The sewage sludge, usually more than 90 percent water, also contains solids and dissolved substances. The chemical composition and biological constituents of the sludge depend upon the composition of the wastewater entering the treatment facilities and the subsequent treatment processes. Typically these constituents may include volatile organics, organic solids, nutrients, disease-causing pathogenic organisms (e.g., bacteria, viruses, and others), heavy metals and inorganic ions, and toxic organic chemicals from industrial wastes, household chemicals, and pesticides.

Implementation of the CWA has resulted in greater levels of treatment of and pollutant removal from wastewater before discharge to surface waters, and the generation of large quantities of residual sewage sludge as a by-product of this treatment. Proper management of ever-growing amounts of sewage sludge is becoming increasingly important as efforts to remove pollutants from wastewater have become more effective. In the United States, the quantity of municipal sewage sludge has almost doubled since the enactment of the Clean Water Act in 1972. Municipalities currently generate over 5.3 million dry metric tons of wastewater sludge per year, or approximately 47 pounds per person per year (dry weight basis).

A POTW has a number of options to dispose of sewage sludge, including applying it to land, incineration, disposing of it in a landfill, or selling it to the public for use as a fertilizer or soil nutrient. However, the composition of the sludge can limit these choices.

One important avenue for sewage sludge disposal is through beneficial use and recycling projects. Sewage sludge is a valuable resource. The nutrients and other properties commonly found in sludge make it useful as a fertilizer and a soil conditioner. Sludge has been used for its beneficial qualities on agricultural lands, in forests, for landscaping projects, and to reclaim strip-mined land.

At the same time, in some situations, disposal of sewage sludge may present an environmental concern because of contamination by harmful pollutants. Greater focus on surface water toxics control, as well as Resource Conservation and Recovery Act (RCRA) provisions such as the ban on land disposal of certain hazardous wastes

(section 3004(d)) and the exclusion of discharges into municipal sewers from RCRA requirements (section 1004(27)), may result in increased volumes of toxic and hazardous pollutants that reach POTWs and consequently may adversely affect sludge quality when these pollutants are removed from the wastewater.

Proper disposal of sewage sludge is important because contaminated or improperly handled sludge can result in pollutants in the sludge re-entering the environment, and possibly contaminating a number of different media through a variety of exposure routes. Further, improper sludge management could lead to environmental degradation of land and air. Failure to dispose of sludge properly or contaminated sludge could also have adverse effects on surface and ground water and wetlands, as well as human health. For example, sewage sludge disposed on land where there is minimal depth to ground water is of concern because contaminants in the sludge may leach out and reach an existing or potential potable water source. Concern for air quality necessitates proper controls over sludge incineration. The interrelationship among these media requires a tightly coordinated, comprehensive approach to encourage the beneficial use of sludge and to avoid creating environmental loopholes, thereby helping to assure that solving problems in one media will not create problems for another.

Section 405 of the Clean Water Act

The CWA, as enacted in 1972, addressed sewage sludge use and disposal in only one limited circumstance: when the use or disposal posed a threat to navigable waters. Thus, section 405(a) of the Act prohibited the disposal of sludge if it would result in any pollutant from the sludge entering navigable waters unless in accordance with a permit issued by EPA. In 1977, Congress amended section 405 to add a new section 405(d) which required EPA to develop regulations containing guidelines for the use and disposal of sewage sludge. These guidelines must: (1) Identify uses, for sludge including disposal; (2) specify factors to be taken into account in determining the methods and practices applicable to each of these identified uses; and (3) identify concentrations of pollutants that would interfere with each use.

In 1987, Congress amended section 405 and for the first time set forth a comprehensive program for reducing the potential environmental risks and maximizing the beneficial use of sludge. Amended section 405(d) established a timetable for the development of the sewage sludge use and disposal guidelines. H. Rep. No. 1004, 99th Cong. 2d. Sess., 158 (1986). The basis of the program Congress mandated to protect public health and the environment is the development of technical requirements or standards for sewage sludge use and disposal and the implementation of these standards, in part, through a permit program.

Under section 405(d), EPA must first identify, based on available information, toxic pollutants which may be present in sewage sludge in concentrations which may affect public health and the environment. Next, for each identified use or disposal method, EPA must promulgate regulations that specify acceptable management practices and numerical limitations for sludge that contains these pollutants. These regulations must be "adequate to protect human health and the environment from any reasonably anticipated adverse effect of each pollutant." Section 405(d)(2)(D). The statute requires EPA to promulgate sewage sludge regulations in two stages and periodically to review these regulations for the purpose of identifying additional toxic pollutants for regulation.

After the technical standards have been promulgated, section 405 directs that any permit under section 402 of the CWA (NPDES permits) issued to a POTW or any other treatment works treating domestic sewage must include conditions to implement the technical standards unless these conditions are included in a permit issued under: Subtitle C of the Resource Conservation and Recovery Act; Part C of the Safe Drinking Water Act; the Marine Protection, Research, and Sanctuaries Act or the Clean Air Act; or under State permit programs approved by EPA, where EPA determines that such programs assure compliance with any applicable requirements of section 405. 33 U.S.C. 1345(f)(1). Section 405 also provides that EPA may issue permits that implement the sludge requirements to treatment works that are not subject to NPDES permitting or to any of the other enumerated programs or approved State programs. 33 U.S.C. 1345(f)(2). These permits are referred to in this preamble as "sludge-only" permits.

Congress provided little guidance for the Agency in carrying out its broad mandate to protect public health and the environment. For example, Congress did not speak directly or provide the Agency guidance about how to interpret certain key phrases in the statute. Consequently, the Agency in determining appropriate sludge standards has faced a number of difficult policy issues. The Agency has addressed the following issues in determining what standards adequately protected public health and the environment from pollutants in sewage sludge when used or disposed.

Regulatory Issues

In determining what standards adequately protected public health and the environment from pollutants in sewage sludge when used or disposed of, the Agency needed to address a myriad of issues including the following:

Scope of the Regulation. Different types of sewage sludge are generated and there are different ways of using or disposing of it. Given the different types of sludge that are generated, which types should the Agency regulate? Of the methods used by communities to dispose of their sewage sludge, which types of methods should the Agency regulate?

Pollutant Coverage. On what basis should the Agency select the pollutants (metals, pesticides, organic contaminants, pathogenic organisms) which are regulated in today's rule?

Pathways of Exposure. What media (air, water, soil) transport the pollutants in sewage sludge into and through the environment?

Target Organisms. What individuals or groups of individuals, plants, or animals are most likely to be affected by the pollutants in sewage sludge?

Models. How will the Agency simulate the movement of the pollutants in sewage sludge into and through the various environmental media to the target organisms?

Type of Risks. What are the potential human health and environmental risks posed by the use or disposal of sewage sludge (e.g., breathing air around a sewage sludge incinerator, drinking water from a well near a monofill, eating food grown on soil to which sludge has been applied, plants growing on sludge-enriched soil, etc.) that the Agency should examine?

Effect Levels. At what concentrations does a pollutant adversely affect human health and the environment? Pollutants from sewage sludge potentially may move through the environment to reach a plant, animal, or human. Plant, animal and human systems may "respond" to the presence of the pollutant. That is, biological systems within the plant, animal or human, may exhibit variations from normal conditions. At what point does this variation constitute an adverse effect? Must the standards protect against all adverse effects or only significant adverse effects? What

are the effects the standards should be designed to prevent (e.g., increased risk of developing cancer or hypertension, phytotoxicity, animal toxicity)?

Acceptable Level of Risk. The statute requires that the sludge regulations "adequately protect human health and the environment from reasonably anticipated adverse effects." What level of risk adequately protects human health and the environment? By requiring "adequate protection" of public health and the environment did Congress intend to leave to EPA's discretion the determination of what adverse effects public health and environmental protection required? Is a consideration of whether the effects are widespread, particularly with respect to non-public health effects, part of the determination of what constitutes adequate protection?

Background Pollutant Levels. What are the sources of pollutant exposure other than sludge (e.g., lead from gasoline or from water supply pipes, etc.)?

Uncertainties. How should the Agency measure and account for the unavoidable uncertainties in its analyses (e.g., use conservative assumptions, add a margin of safety)?

Types of Effects to be Evaluated. Should the Agency evaluate the human health and environmental effects on the most exposed target organisms (individual, plant, or animal) or should the Agency also examine the incidence of adverse effects on the total population associated with sewage sludge use or disposal?

Pollutant Limits. Should a single pollutant limit be established for all use or disposal practices or should a separate pollutant limit be established for each use or disposal method?

Form of the Pollutant Limits. How should the pollutant limits be expressed (e.g., a limitation on pollutant concentrations in sewage sludge, a limitation on pollutant loading rates to land, a limitation on pollutant emission rates, etc.)?

Regulatory Responsibility. Who should be responsible for meeting the requirements in the rule (end user, treatment work)?

Impacts. Who is affected by the rule? What are the benefits and costs of the rule?

Since 1984, the Agency has been conducting an extensive information-gathering and analytical program to support the development of today's regulation. Subsequent to the 1987 amendments to the CWA, the Agency redoubled its efforts. This preamble, the technical support documents, and related analyses of the regulation's impact are the product of that effort and explain the basis for the determinations the Agency has made in establishing these standards.

Fundamental Regulatory Principles

The fundamental assumptions underlying today's final rule are discussed below:

Control Sewage Sludge Quality

Section 405(d) of the CWA directs the Agency to control the quality of sewage sludge by establishing limits for pollutants in sludge applicable to methods of use or disposal. Preventing the contamination of sewage sludge before it is used or disposed of is more equitable than requiring others to contain the contaminated sewage sludge or to deal with the consequences. When it is not feasible for the Agency to set pollutant limits, section 405(d)(3) authorizes EPA to establish a design or equipment standard, management practice, or operational standard or combination of these in lieu of numerical limitations. This is the approach EPA took in the criteria promulgated for municipal solid waste landfills (MSWLFs). There, EPA adopted a containment approach rather than numerical limitations for solid waste, including sewage sludge disposed of in MSWLFs, in part because of the infeasibility of developing and enforcing numerical limitations for mixtures of sewage sludge and other solid waste materials disposed of in MSWLFs (56 FR 50978, October 9, 1991).

By setting limits on sewage sludge quality, this regulation creates incentives for treatment works to generate less contaminated sewage sludge. Treatment works with sewage sludge that does not meet the sludge quality conditions under the standards for a use and disposal practice must clean up the influent (e.g., strengthen the pretreatment programs), improve the treatment of sewage sludge (e.g., reduce the densities of pathogenic organisms), or select another use or disposal method.

Emphasize Waste Reduction and the Beneficial Reuse of Sewage Sludge

Achieving desired national levels of environmental quality depends on the reduction and elimination of the substantial volumes of waste and wastewater generated at home and at work. Without a significant reduction in these volumes (e.g., by home composting food scraps rather than putting them down a garbage disposal), and a corresponding reduction in the residual from wastewater treatment (sewage sludge is also often referred to as "biosolids") that must then be either used or disposed of, attaining these goals is severely hampered.

EPA's policy (i.e., the 1984 Beneficial Reuse Policy and the 1991 Interagency Policy on Beneficial Use of Sewage Sludge) of strongly supporting the beneficial reuse of sewage sludge is closely linked to its objective of reducing the volume of waste generated. The term biosolids has been used to distinguish sewage sludge that has been treated and can be beneficially recycled. Improving the productivity of our land using the soil conditioning properties and nutrient content of sewage sludge has human health and environmental advantages beyond those that are directly associated with applying sewage sludge to the land. Secondary or related benefits of reusing sewage sludge result from a reduction in the adverse human health effects of incineration, a decreased dependence on chemical fertilizers, a reduction in the emissions associated with incineration that may contribute to the "greenhouse effect" and a reduction in fuel or energy costs associated with incineration. In finalizing the rule, the Agency carefully considered, and placed heavy emphasis on, those approaches that supported its policy of beneficial reuse.

Preserve a Local Community's Choice of a Disposal Practice

Although the Agency prefers local communities to use their sewage sludge for its beneficial properties rather than simply disposing of it, EPA's responsibility is to set standards for each practice that are adequate to protect public health and the environment. While the choice of a use or disposal practice is reserved to local communities by section 405(e) of the CWA, protection of public health and the environment, where risks are significant, dictate stringent pollutant limits. One result is that in certain cases communities may be unlikely to meet the limits the Agency has promulgated.

Base the Rule on Minimizing Risks to Individuals and to the Population as a Whole

In developing today's rule, the Agency evaluated the effect of a pollutant on a highly exposed individual, plant, or animal (HEI) and on populations at higher risk. It also examined regulatory options that would have resulted in a rule based on aggregate incidence analyses only (the effect on the whole population), on the most exposed individual, plant, or animal (MEI) analyses only, and a rule

based on a combination of aggregate and MEI analyses. Today's final rule uses an HEI analysis supported by an aggregate risk assessment on higher risk populations or special subpopulations (e.g., children) to ensure protection of public health and the environment.

Promulgate Reasonable Standards

Section 405(d)(2)(D) of the CWA requires the Agency to establish standards adequate to protect public health and the environment from any reasonably anticipated adverse effects of each pollutant found in sewage sludge. In establishing standards, the Agency examined the effect of long-term pollutant exposure and circumstances that could: (1) Increase the toxicity and potency of a pollutant in the environment, (2) speed the movement of a pollutant into and through the environment, and (3) intensify the adverse effect that the pollutant may have on human health or the environment.

This approach is used throughout the rule but it does not protect against every conceivable combination of adverse conditions. In taking such an approach, the Agency recognizes that some risks may not have been fully evaluated and that some risks may remain after regulation. For example, the Agency used the average background value of metals in agricultural soils for applying sewage sludge to agricultural lands and assumed that users of sewage sludge products, such as compost, would follow simple label instructions. EPA expects that few, if any, individuals will receive higher doses of a pollutant than the doses used to establish the standards. Therefore, the Agency has determined that today's rule meets the statutory directive that the standards protect against reasonably anticipated adverse effects of the pollutants. EPA concluded that adequate protection of public health and the environment did not require the adoption of standards designed to protect human health or the environment under exposure conditions that are unlikely and where effects were not significant or widespread.

Promulgate an Implementable Rule

The final rule balances the flexibility associated with site-specific analyses against the simplicity of national numerical limits and self-implementing regulations. A rule that allows exceptions for every conceivable contingency would prove difficult to understand. Moreover, implementation of such a rule would require an unwarranted commitment of the Agency's limited resources without any offsetting increased benefits to public health or the environment. Therefore, the limited exceptions to national pollutant limits are restricted to circumstances in which site-specific conditions may make a significant difference in the pollutant limits without any compromise to public health and environmental protection.

In those cases where site-specific conditions are appropriate, persons disposing of sewage sludge may use EPA approved models and recalculate numerical pollutant limits for sewage sludge disposed of at their site. The modeling analysis, supporting information and recalculated numerical limits are to be submitted to the permitting authority for approval, and if approved, become the numerical limits for sludge quality disposed of at the site.

Section 405(e) of the CWA requires any person that uses or disposes of sewage sludge generated by a treatment works to comply with part 503 standards. Realistically, the Agency cannot issue permits to every user of sewage sludge. Therefore, primary responsibility, and liability, is placed on treatment works for ensuring that sewage sludge is disposed in accordance with the rule's requirements. The final part 503 rule is designed to be self-implementing, and therefore, clearly spells out how the requirements apply to persons using or disposing of sewage sludge. When sewage sludge or sewage sludge products are sold or given away to the general public, sewage sludge must generally meet higher standards of quality. However, the national limits were not designed to protect the public against every conceivable misuse of the product that is distributed and marketed. Rather, the rule assumes that simple instructions on proper use will be followed.

Coordinate With Other Programs

The use and disposal of sewage sludge affects air, soil, and water. In preparing the final rule, the Agency carefully examined the requirements of other media programs and media-specific statutes. Where possible for consistency, the Agency used the tools and standards developed under these other programs. For example, the air models used in developing the limits for incinerating sewage sludge are similar to the models used under EPA's air program. The pollutant limit for incinerating sewage sludge containing lead is designed to be consistent with the National Ambient Air Quality Standard (NAAQS) for lead. This principle is followed throughout the rule. As another example, when the pollutant limits are designed to protect ground water, the Agency used the drinking water standards (maximum contaminant levels—MCLs), where available. Further, when protecting surface water, the Agency used the Water Quality Criteria developed for individual pollutants. In some cases, Agency regulatory standards are undergoing revision. If a new standard is promulgated, the numerical pollutant limit for a use or disposal practice will be revised in later rulemakings.

Expand the Standards Later

The scope of the part 503 standards is necessarily constrained by the adequacy of information on sewage sludge pollutants and means of use or disposal. However, rather than wait for more complete information in order to promulgate all-inclusive regulations, the Agency is promulgating standards for those pollutants and use or disposal practices for which sufficient information exists. The Agency may expand and refine these standards in future rulemakings. Section 405 specifically contemplates that the Agency will issue these standards in stages and revise them periodically.

To remedy information gaps, the Agency conducted the National Sewage Sludge Survey (NSSS) which gathered, among other things, additional information on the pollutants in sewage sludge, how sludge is used and disposed, and information on POTW management of sludge. See, 55 FR 47210 (November 9, 1990). Furthermore, in cooperation with other Agency offices and outside expert reviewers, EPA has gathered data on the movement of certain pollutants into and through the environment (e.g., cadmium), refined and expanded its modeling capability for specific pollutants or disposal practices (e.g., surface disposal sites), supplemented its information on other disposal practices (e.g., sewage sludge incinerators), and further examined the characteristics of domestic septage. Sewage sludge pollutants and methods of use or disposal not covered by today's final rule are candidates for coverage under subsequent phases of the part 503 rulemaking process as adequate data are developed.

In addition, EPA had experts from both inside and outside the Agency review the scientific and technical bases of the rule. This review included the EPA Science Advisory Board, the Cooperative State Research Service, the Regional Research Technical Committee (sometimes called the W–170 committee), representatives of academia, and other scientific/technical bodies with experience in the areas covered by the rule. With the additional

data and the scientific and technical review, the Agency was able to expand and refine the standards for today's final rule.

The preamble summarizes the major scientific peer review and public comments and provides the Agency's response and actions taken in developing today's final part 503 rule. A complete description of all the public comments is provided in Reference No. 109. Information on this and other documents used in developing the final part 503 regulation may be found in Part XIV—Availability of Technical Information on the Final Rule.

Coverage of Today's Rule and the Round Two Rule

Today's rule establishes standards for those pollutants and sludge use or disposal methods for which the Agency had sufficient information to establish protective numerical limits, management practices, and other requirements. The Agency recognizes that today's rule may not regulate all pollutants in sewage sludge that may be present in concentrations that may adversely affect public health and the environment.

Section 405(d) of the CWA specifically contemplates a phased approach to establishing numerical limits for sewage sludge pollutants. Moreover, section 405(d)(2)(D) of the CWA provides that "(f)rom time to time, but not less often than every 2 years, the Administrator shall review the regulation * * * for the purpose of identifying additional toxic pollutants and promulgating regulations for such pollutants * * *." EPA will be using data from the NSSS to identify additional pollutants in sewage sludge that may interfere with the safe use or disposal of the sludge for a second round of rulemaking (Round Two).

For the NSSS, EPA analyzed sewage sludge samples for 419 toxic pollutants. Many of these pollutants were undetected in the samples, infrequently detected or present at levels below detection limits. Consequently, the first step in the process of identifying what additional pollutants EPA may regulate in Round Two is to determine what pollutants are present in sludge in a sufficient number of samples or at concentrations that warrant further examination for national regulation. EPA statisticians have now reviewed the analytical data and completed their initial screening assessment for each pollutant by frequency and level of occurrence.

The next step with respect to Round Two will be review of the scientific literature for toxicity, fate, effect and transport information on the pollutants identified by the initial statistical screening. EPA will use data from the scientific literature on the adverse human health and environmental effects of these pollutants to calculate pollutant concentrations in sludge that would be associated with the identified adverse effects. Through a comparison of the calculated sludge levels associated with adverse effects with the NSSS screening data on actual level and frequency of occurrence, EPA can make a preliminary determination of the pollutants that it should propose for regulation.

If, based on the results of the exposure assessment models, the pollutant presents an unreasonable human health or environmental risk, the Agency would propose numerical limits or other standards (if numerical limits are infeasible or unenforceable) for the pollutant appropriate to a particular method of use or disposal.

Summary of the Final Rule

Today's rule establishes standards for the final use or disposal of sewage sludge when the sewage sludge is applied to agricultural and non-agricultural land (including sewage sludge and sewage sludge products sold or given away—described in the proposed rule as distributed and marketed sludge), placed in or on surface disposal sites, or incinerated. The rule does not apply to the processing of sewage sludge before its ultimate use or disposal. In addition, EPA, in this rule, is not specifying process operating methods or requirements for sludge entering or leaving a particular treatment process.

EPA has not established standards in this rule for sewage sludge that is disposed with municipal solid waste in MSWLFs or that is used as a cover material at MSWLF sites. Under the joint authority of sections 4004 and 4010 of RCRA and section 405(d) of the CWA, the Agency has adopted requirements for MSWLFs that apply to sewage sludge that is placed in these landfills. The disposal of sewage sludge in MSWLFs is regulated under 40 CFR part 258 (see, 56 FR 50978, October 9, 1991). The Agency adopted this approach for reasons explained in more detail below. Treatment works using a MSWLF to dispose of their sewage sludge must ensure that their sewage is non-hazardous and passes the Paint Filter Liquid Test. If these requirements are met, treatment works will be in compliance with section 405(e) of the CWA.

The standards also do not apply to sewage sludge that is co-incinerated with large amounts of solid waste (see, 56 FR 5507, February 11, 1991). However, the standards established in the rule do apply to sewage sludge that is incinerated in a sewage sludge incinerator with incidental amounts of solid waste used as an auxiliary fuel (i.e., 30 percent or less solid waste by weight).

The rule applies to sewage sludge that is generated or treated by publicly owned and privately owned treatment works treating domestic sewage and municipal wastewater. The rule does not apply to domestic sewage that is treated along with industrial wastewater by privately owned industrial facilities. The Agency has the authority under section 405(d) of the CWA to regulate industrial sludges with a domestic sewage component, and it plans to consider regulating these sludges in future part 503 rulemakings. However, until the Agency develops part 503 regulations to cover industrial sludges produced by privately owned facilities from the treatment of industrial wastewater with a domestic sewage component, those sludges (as well as non-hazardous industrial sludges without a domestic sewage component) will be regulated under 40 CFR part 257.

The regulations promulgated here today do not establish disposal standards for sewage sludge that is determined to be hazardous under procedures in appendix II of 40 CFR part 261. Hazardous sewage sludge must be disposed of in compliance with the hazardous waste regulations in 40 CFR parts 261–268. Compliance with these requirements will constitute compliance for purposes of section 405. Also, sewage sludge found to contain 50 ppm or more of PCBs is excluded from this rule. Sewage sludge with 50 ppm or more of PCBs must be disposed of according to the requirements established in 40 CFR part 761. Similarly, while EPA has not established standards the disposal of PCB-contaminated sludge, a disposer complying with 40 CFR part 761 would not violate section 405.

Finally, no standards are established for the ocean disposal of sewage sludge regulated by the Marine Protection, Research, and Sanctuaries Act (MPRSA). The Ocean Dumping Ban Act of 1988, Public Law 100–688, amended MPRSA to prohibit any person from dumping sewage sludge into ocean waters after December 31, 1991. In addition, Congress limited ocean dumping during the interim period to those who were authorized as of September 1, 1988, to dump either under an MPRSA permit or a court order. Further, Congress prohibited

dumping after August 15, 1989, unless an MPRSA permit had been obtained by that time. All remaining communities that dumped their sewage sludge in the ocean ceased dumping at the end of June, 1992.

The rule includes specific numerical limits (or equations for calculating these limits) for 10 pollutants when sewage sludge is used or disposed by one or more methods. Not every pollutant is regulated under each practice. EPA developed these numerical limits by using exposure assessment models designed to protect individuals, plants, animals or other organisms potentially at greater risk from pollutants in sewage sludge. In the case of sewage sludge that is incinerated, in addition to numerical limits, the Agency is also establishing an operational standard for total hydrocarbons rather than for individual organic pollutants.

The numerical limits derived from the exposure assessment models are designed to protect public health or the environment from reasonably anticipated adverse effects. These models incorporated well-established measures of human health or environmental protectiveness as their design end-point. Thus, EPA based its environmental assessment on human health or environmental criteria already published or promulgated by the Agency, on human health criteria developed by the Agency, or on plant and animal toxicity values published in the scientific literature. Thus, for example, when sewage sludge is incinerated, the numerical limit for lead is based on the NAAQS for lead. When the objective is to protect sources of drinking water, pollutant limits were developed which would ensure that drinking water MCLs established under the Safe Drinking Water Act are not violated. When the objective is to protect surface water, Water Quality Criteria issued under section 304 of the Clean Water Act are used. In its exposure assessment, if the Agency had not published or promulgated criteria for specific pollutants, EPA evaluated non-cancer human health risks from pollutant exposure using reference doses. EPA evaluated cancer risk using cancer potency factors—so-called Q_1* or Q* values—listed in the Agency's computerized Integrated Risk Information System (IRIS). In all cases, EPA used cancer potency values corresponding to an incremental carcinogenic risk level of 1×10^{-4} to evaluate the risk from pollutants found in sewage sludge. (The exposure level of a pollutant associated with a 1×10^{-4} cancer risk implies that one additional cancer case will occur in a population of 10,000 exposed at that level for 70 years.) For purposes of establishing the numerical limits for incinerators promulgated today, EPA did, however, evaluate exposure at different incremental cancer risk levels (i.e., 1×10^{-4} through 1×10^{-6}). In the case of human health, the final limits for pollutants in sewage sludge ensure that the use and disposal of sludge does not result in ambient concentrations of the regulated pollutants that exceed an incremental carcinogenic risk level of 1×10^{-4}.

For sewage sludge disposed of in or on surface disposal sites (including sludge-only landfills, often referred to as "monofills") or incinerated, treatment works may submit modeling and data analyses (for certain physical parameters related to the site) used to recalculate site-specific numerical limits. The permitting authority will review and approve the treatment works' site-specific modeling and data analyses used to recalculate numerical limits using EPA-approved exposure assessment methods. Since these recalculated numerical limits are based on EPA-approved models and the same human health and environmental criteria as the national numerical limits, the recalculated limits will also adequately protect human health and the environment from reasonably anticipated adverse effects of pollutants found in sewage sludge.

EPA has also acted today to amend 40 CFR part 403 to authorize treatment works to authorize removal credits for certain pollutants. The amendment lists those pollutants for which removal credits may be authorized. In addition to the pollutants for which specific numerical limits are established, removal credits may be available for pollutants that EPA evaluated for regulation and for which EPA decided not to establish numerical limits.

In the case of sewage sludge applied to the land or disposed of in or on surface disposal sites, the final rule establishes requirements for pathogenic organisms or pathogenic indicator organisms such as fecal coliform. The rule also includes requirements for destroying or reducing those characteristics of sewage sludge that attract birds, insects, rats and other animals (so-called "vectors"). "Vector" exposure to the pathogenic organisms in sludge can cause transfer of pathogens (and consequently spread disease) from these disease vectors to humans. The final rule consequently requires measures for reducing the attraction of vectors to sewage sludge. These measures could include destruction of the odor causing properties of sludge that lure insects and animals.

Supplementing the numerical pollutant limits are management practices and general requirements to protect human health and to prevent gross abuse of the environment. In the case of small quantity sludge that is sold or given away in a bag or other container, the rule requires the treatment works (or other person, if different from the treatment works) to label the product. The label is to provide instructions on properly using the product.

The rule also includes monitoring, recordkeeping, and reporting requirements. The frequency with which sewage sludge is to be monitored depends on the quantity of sludge used or disposed by a treatment works. The pollutants for which treatment works must monitor their sewage sludge similarly depend on the use or disposal method selected. The recordkeeping and reporting requirements are also specific to a particular method of use or disposal.

The final rule is expected to cover nearly 35,000 entities. These entities include: primary treatment POTWs, secondary and advanced treatment POTWs, privately owned treatment works, Federally owned treatment works, and domestic septage haulers.

Based on the NSSS, this rule is expected to affect approximately 6,300 of the 12,750 secondary, advanced, and primary POTWs that use one or more of the disposal practices included in the rule. These 6,300 facilities generate or treat approximately 60 percent of the sewage sludge produced in the United States. Of the remaining POTWs, an estimated 2,700 dispose of their sewage sludge (34 percent of the total sewage sludge generated) in MSWLFs that are to be regulated under 40 CFR part 258 (56 FR 50978, October 9, 1991). The remaining 3,750 POTWs use other disposal practices not covered in either this regulation or the MSWLF rule. In some cases, compliance with the requirements for those other practices constitutes compliance with 405(d) of the CWA.

The aggregate risk assessment estimates that current use and disposal practices contribute from less than one up to five cancer cases annually, with a lifetime cancer risk to a highly exposed individual ranging from 6×10^{-4} for land application and surface disposal of sludge and from 6×10^{-4} to 7×10^{-3} for incineration. The other health effects associated with sewage sludge use and disposal are primarily related to lead exposure and result in approximately 2,000 individuals who exceed a

threshold blood lead level associated with adverse health effects and 700 instances of hypertension in adult males or diminished learning capacity in children. The Agency estimates that the rule reduces cancer cases by 0.09–0.7, exceedences of lead adverse health threshold by 600–2,000 and instances of lead cases by 90–600.

For the purpose of the regulatory impact analysis, the Agency estimated that approximately 130 of the 6,300 affected POTWs may have sewage sludge which does not meet the numerical limits. This estimate does not take into consideration the possibility that some POTWs may come into compliance by using site-specific data to calculate new numerical limits and by imposing more stringent pretreatment requirements on their industrial dischargers. The Agency estimates annual compliance costs of $45.9 million or an increase of less than $1 annually for each household served by the affected POTWs. The total annual incremental compliance costs include costs for sludge monitoring, management practices, and in some cases, incremental costs of changing a practice for POTWs that fail to meet the numerical pollutant limits for a practice.

The technical support documents, aggregate human health risk analyses, the regulatory impact analyses, and the preamble discuss the factors that EPA considered, the data and comments it evaluated, and the determinations that it made in developing the final rule. The preamble summarizes this information in 15 parts.

Part I briefly describes the generation, volume, and constituents of sewage sludge and the factors that communities must consider in using or disposing of the sewage sludge that results from the treatment of domestic sewage and municipal wastewater. Part I also identifies the ways in which communities commonly use or dispose of their sewage sludge, the benefits of reusing sewage sludge, and the risks associated with its disposal.

Part II lists existing Federal and State requirements for the use and disposal of sewage sludge including the relationship of the existing requirements to today's rule.

In part III, the preamble begins to describe how the Agency developed the final rule. Initially, the Agency selected pollutants most likely to interfere with the safe use or disposal of sewage sludge and then refined the list of pollutants based on the availability of information on the toxic effects of the pollutants. In refining the initial list of pollutants, the Agency simulated the movement of pollutants into and through the environment with a series of exposure assessment models to determine the concentrations of pollutants reaching an individual, plant, or animal.

In part IV, the preamble briefly describes the February 6, 1989 proposed rule.

In part V, the preamble discusses the Agency's effort to develop current data on sewage sludge quality and an accurate characterization of current methods of sludge use and disposal employed by treatment works. This part describes EPA activity following the proposal including efforts to obtain additional information on sewage sludge incinerators and domestic septage. This part also describes the November 9, 1990 Notice of Availability of Information and Data, and Anticipated Impacts on Proposed Regulations.

Parts VI and VII discuss the alternative regulatory approaches and public comments the Agency considered in developing the risk assessment methodology for the final rule. Included in the discussion are the factors on which the Agency based its risk management decisions and its selection of a risk assessment methodology that would adequately protect public health and the environment.

Part VIII discusses the proposed exposure assessment methodology and public comments the Agency considered in developing the exposure assessment methodology for the final rule. This part also describes the (1) critical exposure assessment models, pathways, parameters and assumptions; (2) other risk management issues evaluated by the Agency; and (3) the human health and environmental criteria used to establish numerical limitations for each sewage sludge use and disposal practice.

Part IX describes the criteria the Agency used to select pollutants for regulation in the final part 503 rule.

Prior to selecting its approach for establishing standards for a particular use or disposal practice, the Agency examined the aggregate human health effects on highly exposed individuals and the nation from the use and disposal of sewage sludge. The methods used to conduct these analyses and the results are described in part X.

Part XI describes, in separate subparts, the requirements that apply to the use and disposal of sewage sludge. In addition, part XI describes the requirements for septage use and disposal, the pathogen and vector attraction requirements; and the monitoring, record-keeping and reporting requirements.

Part XII briefly discusses the implementation of the final rule through Federal and State permit programs and the self-implementing nature of the regulations. Under a separate rulemaking, the Agency promulgated State program management requirements and changes in the National Pollutant Discharge Elimination System permitting requirements (54 FR 18716, May 2, 1989).

The benefits, costs, and regulatory impact of the rule are described in part XIII. This part also discusses the data limitations and assumptions, and determinations that the Agency made in fulfilling its responsibilities under Executive Order 12291.

Part XIV provides information on where interested persons may obtain copies of today's rule, the technical support documents, the aggregate risk assessment, and the regulatory impact analysis. Included in this part is the list of references cited throughout the preamble.

Part XV describes the changes in 40 CFR parts 257 and 403. These changes are limited to revisions to part 403 and to removing from coverage in part 257 sewage sludge use and disposal methods which will be subject to the new standards the Agency is establishing in 40 CFR part 503. Finally, part XV lists the subjects in 40 CFR parts 257, 403 and 503.

Part I: Generation, Use, and Disposal of Sewage Sludge

Generation of Sewage Sludge

The CWA requires municipalities to clean their wastewater prior to discharging it. Wastewater treatment generates sludge which in turn must either be disposed of or used. Sludge management begins with sludge generation and continues through sludge processing and ultimate disposal.

Domestic wastewater contains material flushed into household drains through toilets, sinks, and tubs. Components of domestic sewage include soaps, shampoos, human excrement and tissue, food stuffs, detergents, pesticides, household hazardous waste, and oil and grease. Typically a family of four discharges 300 to 400 gallons of wastewater per day.

Domestic wastewater is treated (or partially treated) at its source in septic tanks, cesspools, portable toilets, or in publicly or privately owned wastewater treatment works. These treatment works may treat domestic wastewater alone or a combination of domestic wastewater and industrial wastewater.

Municipal wastewater treatment works may use one or more levels of treatment (i.e., primary, secondary, or tertiary) to clean this wastewater. Each level of treatment provides both greater wastewater cleanup and greater amounts of sewage sludge.

Primary treatment processes remove the solids that settle out of the wastewater by gravity. This generates 2,500 to 3,500 liters of sludge per million liters of wastewater treated. Primary sludge contains 3 to 7 percent solids, 60 to 80 percent of which is organic matter. The water content of primary sludge can easily be reduced by thickening or by removing water.

Secondary treatment produces a sludge generated by biological treatment processes. Biological treatment processes (e.g., activated sludge systems, trickling filters, and other attached growth systems) utilize microbes to break down and convert the organic substances in the wastewater to microbial residue. These processes remove up to 90 percent of the organic matter in the wastewater and produce a sludge that typically contains from 0.5 to 2 percent solids. These solids are generally more difficult to de-water than primary sludges. The organic content of the solids ranges from 50 to 60 percent. Secondary treatment processes increase the volume of sludge generated over primary treatment by 15,000 to 20,000 liters of sludge per million liters of wastewater treated.

Advanced wastewater treatment processes, such as chemical precipitation and filtration, produce an advanced or tertiary sludge. Chemical precipitation uses chemicals to remove organics and nutrients and to separate the solids from the wastewater. Characteristics of these sludges vary, depending upon the type of advanced treatment process used and the type of wastewater entering the treatment process. Since these sludges typically contain considerable amounts of added chemicals, the solids content will vary from 0.2 to 1.5 percent, while the organic content of the solids will be in the 35 to 50 percent range. Tertiary treatment increases the volume of sludge generated over secondary treatment by another 10,000 liters of sludge per million liters of wastewater treated.

Unprocessed sewage sludge contains from 93 to 99.5 percent water, as well as the solids and dissolved substances that were present in the wastewater or that were added or cultured by the wastewater treatment process. While virtually all sewage sludge contains nutrients (e.g., nitrogen, phosphorus) and significant numbers of pathogens (e.g., bacteria, viruses, protozoa, and eggs of parasitic worms), some sludges also contain more than trace amounts of organic chemicals (e.g., chloroform) and inorganic chemicals (e.g., iron). These pollutants come from domestic wastewater, from the discharge of industrial wastewater to municipal sewers, and from the runoff from parking lots and lawns and fields where fertilizers and pesticides were incorrectly applied.

Sludge Processing

Prior to reusing or disposing of sewage sludge, treatment works generally thicken, stabilize, and de-water the sewage sludge. Sludge thickening is the removal of water from sludge to achieve a volume reduction. The reduction in sludge volume decreases the capital and operating costs of subsequent sludge processing and disposal operations. For example, lowering the volume of sewage sludge reduces transportation costs. EPA estimates that the cost of transporting sewage sludge with a 22 percent solids content over a 20-mile trip is about one-half the cost of transporting sewage sludge with a 6 percent solids content over the same distance.

Treatment works frequently digest or compost their sewage sludge to reduce the level of pathogens and odors. The degree to which a sludge is processed is very important when applying sewage sludge to land, when distributing and marketing it, and when placing sewage sludge in monofills or on surface disposal sites in order to eliminate the spread of pathogenic diseases.

Amount of Sewage Sludge Generated

Approximately 12,750 POTWs generate 5.4 million dry metric tons of sludge annually (see Table I–1), or 47 pounds of sewage sludge (dry weight basis) for every individual in the United States (based on Questionnaire Survey and other sources).

Unless the volume of sludge is reduced, the nation cannot achieve its environmental quality objectives. Treatment alone is not the answer. Communities should consider the following additional measures to reduce the quantity of sludge generated by wastewater treatment: implement waste separation and water conservation programs, encourage the recycling of garbage in compost piles, separate household hazardous waste prior to collection and handling, and separate storm water from wastewater sewer systems. These measures have proved successful in reducing the volume of wastewater generated and in improving the quality of the sewage sludge that is ultimately used or disposed.

Use and Disposal Methods

Sewage sludge is commonly used or disposed of in a number of ways. These include the following: Application of sludge to agricultural and non-agricultural lands; sale or give-away of sludge for use in home gardens (often referred to as distribution and marketing of sludge); disposal of sludge in municipal landfills, sludge-only landfills (known as monofills), and surface disposal sites; and incineration of sludge.

Table I–1 shows the amount of sludge that is generated based on the size of a facility and on the amount of sewage sludge that is disposed of by a use or disposal practice. Table I–2 shows the number of facilities using a particular method of use or disposal.

TABLE I–1.—ESTIMATED MASS OF SEWAGE SLUDGE DISPOSED ANNUALLY BY PRIMARY, SECONDARY, OR ADVANCED TREATMENT POTWS BY SIZE OF POTW AND USE/DISPOSAL PRACTICE

[Thousands of dry metric tons]

Use or disposal practice	Reported flow rate (MGD)				Total (percent of total)
	>100	>10 to 100	>1 to 10	≤1	
Incineration	382.9	346.5	124.8	10.5	854.7 (16.1)
Land application:					
Agricultural	203.0	400.8	423.9	143.2	1 170.9 (21.9)
Compost	22.4	65.3	31.7	30.8	150.2 (2.8)

TABLE I–1.—ESTIMATED MASS OF SEWAGE SLUDGE DISPOSED ANNUALLY BY PRIMARY, SECONDARY, OR ADVANCED TREATMENT POTWS BY SIZE OF POTW AND USE/DISPOSAL PRACTICE—Continued

[Thousands of dry metric tons]

Use or disposal practice	Reported flow rate (MGD)				Total (percent of total)
	>100	>10 to 100	>1 to 10	≤1	
Forests	4.5	24.5	1.0	1.3	32.3 (0.6)
Public contact	52.1	80.5	40.3	8.3	165.1 (3.1)
Reclamation	52.8	9.8	2.4	1.0	65.8 (1.2)
Sale	30.8	27.8	11.9	0.8	71.1 (1.3)
Undefined	12.7	76.4	27.2	13.0	129.3 (2.4)
Co-disposal: Landfill	518.6	674.0	495.6	110.4	1,818.7 (34.0)
Surface disposal:					
Dedicated site	34.2	124.9	63.2	36.5	258.8 (4.8)
Monofill	13.0	79.0	41.6	22.2	157.4 (2.9)
Other	31.5	50.0	17.4	28.5	137.5 (2.6)
Unknown:					
Ocean*	166.1	157.9	8.0	3.4	335.5 (6.3)
Other	0	0	0	0	0
Transfer	N/A	N/A	N/A	N/A	N/A
Total	1,532.0	2,128.3	1,284.1	407.7	5,357.2
(Percent of total)	(28.6)	(39.7)	(24.1)	(7.6)	(100.0)

Note: * This survey was conducted before the Ocean Dumping Ban Act of 1988, generally prohibited the dumping of sewage sludge into the ocean after December 31, 1991. Ocean dumping of sewage sludge ended in June, 1992. Numbers may not add up to 100 percent because of rounding.
Source: Prepared by ERG for EPA—1988 National Sewage Sludge Survey and 1988 Needs Survey.

TABLE I–2.—NUMBER OF PRIMARY, SECONDARY, AND ADVANCED TREATMENT POTWS AND THE QUANTITY OF SEWAGE SLUDGE DISPOSED ANNUALLY BY USE OR DISPOSAL PRACTICE

[Thousands of dry metric tons]

Use/disposal practice	POTWs using a use/disposal practice		Quantity of sewage sludge disposed	
	Number	Percent of POTWs	Quantity (1,000 dmt)	Percent of sludge
Incineration	381	2.8	864.7	16.1
Land application	4,657	34.6	1,785.3	33.3
Co-disposal: Landfill	2,991	22.2	1,818.7	33.9
Surface disposal	1,351	10.0	553.7	10.3
Unknown:				
Ocean disposal*	133	1.0	335.5	6.3
Other	3,920	29.1	0	0.0
Transfer	25	0.2	N/A	N/A
All POTWs	13,458	100.0	5,357.2	100.0

Note: The total number of POTWs does not equal the number in the text because some of the POTWs utilize more than one use or disposal practice and are counted twice in this table.
* The National Sewage Sludge Survey was conducted before the Ocean Dumping Ban Act of 1988, generally prohibited the dumping of sewage sludge into the ocean after December 31, 1991. Ocean dumping of sewage sludge ended in June, 1992. Numbers may not add up to 100 percent because of rounding.
Source: Prepared by ERG for EPA—1988 National Sewage Sludge Survey (Questionnaire Survey) and 1988 Needs Survey, and ERG estimates.

Benefits of Reusing Sewage Sludge

The organic and nutrient content of sewage sludge (biosolids) makes it a valuable resource to use both in improving marginal lands and as a supplement to fertilizers and soil conditioners. A study of sewage sludge and effluent use on selected agricultural crops in one area of Oregon found that the return per acre of sludge application ranged from a loss of $6 to an increase of $15 per acre. This was compared to traditional fertilizer sources and depended on crop rotation, previous soil management practices, soil type, and level of sludge application. The farmer gained net savings in the cost of fertilizers, taking into account the fact that the sludge was available at no cost (Reference No. 10).

The beneficial uses of sludge are not limited to the production of agricultural commodities. Sewage sludge is used in silviculture to increase forest productivity and to re-vegetate and stabilize harvested forest land and forest land devastated by fires, landslides, or other natural disasters. The application of sewage sludge to forest land shortens wood production cycles by accelerating tree growth, especially on marginally productive soils. Studies at the University of Washington on the use of sludge as a fertilizer in silviculture show height increases of up to 1,190 percent and diameter increases of up to 1,250 percent compared to controls in certain tree species. University of Washington research has also shown

that trees grow twice as fast on sludge-amended soil. This means that a tree which would typically be cut after 60 years could be cut after only 30 years to supply lumber for a variety of purposes.

Sludge is productively used to stabilize and re-vegetate areas destroyed by mining, dredging, and construction activities. Air-dried sludge that looks like compost is frequently used to fertilize highway median strips, clover-leaf exchanges, and for covering expired landfills. Historically, land reclamation has been very successful and comparable in cost to other commercial methods. In a strip-mined area in Fulton County, IL, reclamation using municipal sewage sludge cost $3,660 an acre, as compared with a range of $3,395 to $6,290 an acre using commercial methods (Reference No. 49). Pennsylvania has used the sludge Philadelphia generates to reclaim more than 3,000 acres of devastated lands. Sludge, in combination with fly ash, is currently used in the re-vegetation of soils that have become highly contaminated from the operation of a zinc smelter in Palmerton, PA, over the past 90 years.

EPA analyses show that current beneficial use practices (i.e., land application, and sale and give-away) pose less carcinogenic risk than disposal practices. On a per ton basis, carcinogenic risks from reusing sewage sludge range from 8×10^{-8} to 4×10^{-7}, while those from incinerating and disposing of sewage sludge in monofills range from 2×10^{-7} to 5×10^{-6}.

Studies using Philadelphia sludge have shown that the microbial communities in reclaimed mined soils revert to those of normal soils within 2 to 3 years. Conventional reclamation could take as long as 10 to 15 years, or even longer (Reference No. 49).

Forest soils have been found to be well suited to sludge application because they have high rates of infiltration (which reduce run-off and ponding), large amounts of organic material (which immobilize metals from the sludge), and perennial root systems (which allow year-round application in mild climates). Although forest soils are frequently quite acidic, research at the University of Washington has found no problems with metal leaching following sludge application (Reference No. 14). In addition, studies of animals living on sludge-treated sites have found that the animals are healthier than those on control sites because of the increased production of vegetative matter.

The sale of sewage sludge products can be used to defray the costs of de-watering and composting the sewage sludge, but no similar mechanism exists to defray the costs of de-watering sewage sludge placed in landfills or incinerated. Further, the labor, capital, and operating and maintenance costs of incinerating sewage sludge are substantially higher.

The Municipality of Metropolitan Seattle (METRO), which treats wastewater in the Seattle-King County region, began using sludge to improve soil in several Seattle area parks, restore land disturbed during strip mining, restore a gravel pit used for Interstate 90 construction, and enhance grass growth at the King County International Airport at Boeing Field. In October 1983, the METRO Council adopted a sludge management plan that outlined a goal to use at least eight alternative sludge recycling or disposal methods through the year 2000. METRO reports that its plants produced 65,000 tons of sludge in 1985 and more than 91,000 tons in 1987. Sludge production is expected to increase dramatically in the next decade after METRO's Puget Sound plants are upgraded from primary to secondary treatment. METRO says that by creating a demand for sludge and developing a variety of recycling options, it reduced program expenses from $227 per ton of sludge solids in 1983 to $148 in 1987.

The benefits of using sewage sludge to improve land productivity are substantial. However, if sewage sludge containing high levels of pathogenic organisms (e.g., viruses, bacteria) or high concentrations of pollutants is improperly handled, the sludge could contaminate the soil, water, crops, livestock, fish, and shellfish. The major human health, environmental, and aesthetic factors of concern in the land application of sewage sludge are related to pathogens, metals and persistent organic chemicals content, and odors. The standards promulgated today would prevent the contamination of soil and crops by pathogens, as well as the contamination of food and animal feed crops when sewage sludge is applied to lands used in the production of agricultural crops or to lands that may be converted to residential use.

While the use of sewage sludge for beneficial purposes is primarily related to farm and home garden use, use of sewage sludge to aid in the growth of a final vegetative cap for municipal solid waste landfills is also considered a beneficial use of sewage sludge and should be encouraged. By taking advantage of the nutrient content and soil amendment characteristics of sewage sludge, a vegetative cover or cap can be quickly grown to facilitate the municipal solid waste closure plan.

In spite of the benefits of reusing sludge, only one-third of the sewage sludge generated in the United States is effectively reused by applying it to the land, or sold or given away for use in home gardens (see Table I–2). In comparison, Japan uses 42 percent of its sewage sludge for coastal reclamation and home garden or farming uses. The United Kingdom applies 51 percent of its sewage sludge to the land (Reference No. 4).

While section 405(e) of the CWA reserves the choice of use and disposal practices to local communities, EPA's preference is for local communities to reuse this resource in beneficial ways. On June 12, 1984, the EPA published its policy on the management of sewage sludge stating that the Agency will actively promote those municipal sludge management practices that provide for the beneficial use of sludge while maintaining or improving environmental quality and protecting public health (see 49 FR 24358).

When the quality of the sewage sludge appears to be a limiting factor for an otherwise desirable use, POTWs can establish discharge limits for non-domestic users discharging wastewater to the POTW. Controlling the quality of non-domestic wastewater discharged into municipal sewers is an important element in managing the quality of sewage sludge.

All dischargers of non-domestic wastewaters are required to meet all applicable National Pretreatment Standards. These may include general and specific prohibited discharge standards, categorical pretreatment standards, and local limits.

In addition, POTWs designed to accommodate design flows of more than 5 million gallons per day and smaller POTWs with significant industrial discharges are required to establish local pretreatment programs. Currently 2,015 of the nation's POTWs operated by 1,528 authorities have local pretreatment programs. The local program must include adequate legal authorities, industrial user permitting, compliance monitoring, enforcement, and public participation. These 1,528 approved programs are estimated to receive 80 percent of the national wastewater flow discharged to POTWs.

In addition to wastewater reduction and the separation of contaminated waste from uncontaminated wastes, pretreatment of non-domestic wastewater is another key step in managing the quality of sewage sludge. If pretreatment does not reduce the pollutant levels sufficiently, communities may have to dispose rather than use their sludge and, depending on the disposal method, add pollution

controls and thereby increase the cost of sludge disposal.

Use of Sewage Sludge

Land Application to Agricultural Lands

Some 66 percent of the sludge applied to land (approximately 1.2 million dry metric tons) is used to improve the condition and nutrient content of soil for agricultural crops, including row and feed crops and pastures. The method of applying sludge to agricultural land depends on the physical characteristics of the sludge and soil and on the crops grown. Liquid sludge may be applied with tractors, tank wagons, irrigation systems, or special application vehicles. Liquid sludge may also be injected under the surface layer of the soil. Dewatered sludge, on the other hand, is typically applied to cropland by equipment similar to that used for applying limestone, animal manures, or commercial chemical fertilizers. Generally, the dewatered sludge is applied to the land surface and then incorporated by plowing or disking. When applied to pasture land, sludge is usually not incorporated into the soil.

Land Application to Non-Agricultural Lands

Ten or more States have undertaken sludge application to forest land, at least on an experimental field-scale level. The most extensive experience with this practice is in the Pacific Northwest. Sludge is most often sprayed from mobile equipment into established forest stands as a partially dewatered, but still liquid, material. Other types of non-agricultural land application include sewage sludge applied to public contact sites (e.g., parks, cemeteries, golf courses) and reclamation sites.

When sewage sludge is used to stabilize and re-vegetate land at reclamation sites, typically large amounts of sludge (up to 112 metric tons per hectare or more) are applied on a one-time basis. This large amount is necessary to ensure that sufficient organic matter and nutrients are introduced into the soil to support vegetation until a self-sustaining ecosystem is established.

Land Application—Sale or Give-Away of Sewage Sludge

Approximately 12 percent of the sewage sludge generated is sold or given away for use on home gardens. As a method of managing sewage sludge, this is a highly beneficial practice and one the Agency encourages.

Usually, sewage sludge that is sold or given away is composted, or heat dried and formed into pellets. In composting sewage sludge, the sludge is dewatered; mixed with a bulking agent, such as wood chips, bark, rice hulls, straw, or previously composted sludge; and allowed to decompose aerobically for a period of time. In this form, the sewage sludge is dry, practically odorless, and easier to distribute. It is also easier for the user to handle. Sewage sludge that is distributed and marketed is used as a substitute for topsoil and peat on lawns, golf courses, parks, and in ornamental and vegetable gardens. Yield improvements have been valued at $35 to $50 per dry ton over other potting media.

Risks of Disposal Methods

Communities should consider alternatives other than burying or burning their sludge. These are wasteful practices that pose risks and incur costs. Some methods of sewage sludge disposal, such as incineration and uncovered landfills, may contribute to global warming (i.e., the "greenhouse effect") by releasing carbon dioxide and methane.

Sewage sludge with high concentrations of certain organic and metal pollutants may pose human health problems when disposed of in sludge-only landfills (often referred to as monofills) or simply left on the land surface, if the pollutants leach from the sludge into the ground water. Therefore, the pollutant concentration may need to be limited or other measures such as impermeable liners must be taken to ensure that ground water is not contaminated.

For the incineration of sewage sludge, municipalities must take sufficient measures to control the emissions from sewage sludge incinerators. Otherwise, particulates, heavy metals, toxic organic compounds, and hydrocarbons will add to a community's air pollution problems.

Ocean dumping of sludge, which Congress banned after 1991, may result in the destruction of biota that influence the balance between oxygen and carbon dioxide. In ocean disposal, certain pollutants often associated with municipal sludge, including mercury, cadmium, and polychlorinated biphenyls, can bioaccumulate. High levels of these pollutants can interfere with the reproductive systems of certain marine organisms, may produce toxic effects in aquatic life, or may present public health problems if individuals eat contaminated fish and shellfish.

Disposal Methods

Surface Disposal

Sewage sludge surface disposal—a term used to describe what are essentially piles of sludge left on the land surface and includes land application to dedicated non-agricultural land and disposal in sludge-only landfills—is a common means of sludge disposal. The majority of surface disposal sites are smaller than 1 acre and receive less than 50 gallons per day of waste.

Generally, surface disposal sites do not have a vegetative or soil cover. Depending on the State in which they are located, surface disposal sites may be regulated in a manner similar to monofills or landfills. In other cases, surface disposal sites are areas of land where sewage sludge has been placed for many years with little or no consideration given to its ultimate disposal.

Disposal on Dedicated Sites

Contained in the surface disposal subpart of today's final rule is the provision for applying sewage sludge at greater than agronomic rates to grow food, feed and fiber crops. These crops may be grown and animals grazed if the owner/operator demonstrates to the permitting authority, that through management practices, public health and the environment are protected from reasonably anticipated adverse effects of pollutants in sludge.

Municipal sewage sludge is often applied at greater than agronomic rates at sites specifically set aside for municipal sludge management. Such application rates are needed to reclaim and restore marginal and disturbed soils, such as strip mines, to full agricultural productivity. Sludge contains organic matter typically in the range of 30 to 50 percent. Barren and strip-mine soils contain organic matter levels of less than one-half percent which is considerably less than the three to five percent needed for full agricultural productivity. In addition, such sites may likely be barren, very erodible and acidic, and a threat to ground and surface waters. Sludge applications greater than agronomic rates and even cumulative rate limits can overcome the barren, erosion and acid problems. Moreover, these applications can restore the organic matter levels to that needed to produce such commercial agricultural crops such as corn which would have been impossible to produce otherwise.

Sites which use sludge application at greater than agronomic rates are generally owned, operated, and

controlled by, or are controlled under long-term leases to, the municipal sludge operator. Generally, public access to these sites is strictly controlled. Sites may range in size from ten acres to greater than 10,000 acres. Sludges applied to such dedicated beneficial use sites apply nitrogen, phosphorus, and other macro- and micro-nutrients to crops and as was already stated may also be used to condition soils at sites containing disturbed lands. For example, the Metropolitan Water Reclamation District of Greater Chicago has been operating a 15,600 acre site for 20 years in Fulton County, Illinois. Sewage sludge is applied to condition and fertilize strip-mine spoils to produce crops, such as corn, which are sold as animal feed or for alternative fuel production, and is also used to reclaim acid coal refuse piles with vegetative cover.

In contrast to their large, rural, Fulton County site, the Metropolitan Water Reclamation District of Greater Chicago also operates a site in the Village of Hanover Park, one of Chicago's residential suburbs. The site lies on the property of the District's Hanover Park Water Reclamation Plant and the entire annual sludge production is utilized to fertilize row crops and nursery stock. This 120 acre farm, complete with a tile drainage system for recirculation of field percolate, has been successfully operated for 13 years and has harmoniously coexisted with its "across the fence" neighbors, a grade school and a community of single family homes.

However, the primary objective of this practice is to employ the land as a treatment system by using soil to bind metals and by using soil microorganisms, sunlight, and oxidation to destroy the organic matter and pathogens in the sludge. These sites are generally owned by, or are under long-term leases to, a treatment work. Frequently, the dedicated land disposal site has a non-food chain vegetative cover crop (e.g., sod, pulpwood) to reduce the potential for runoff or leaching of the pollutants to surface or ground water. In some cases, as discussed above, an attempt is made to use the nutrient and soil conditioning properties of the sewage sludge to grow crops for methanol production or for other purpose.

Landfilling

Landfilling is a sludge disposal method in which sludge is deposited in a dedicated area, alone or with solid waste, and buried beneath a soil cover. Landfilling is another disposal method that does not attempt to recover the nutrient content of the sludge for beneficial uses. However, the decomposition of organic matter in sewage sludge that is landfilled produces methane gas. The methane gas can be recovered and yields an energy value more than half as great as that of natural gas.

Thirty-three percent of the sewage sludge disposed of by 22 percent of the POTWs is landfilled with municipal solid waste. In co-disposal, the absorption characteristics of the solid waste and soil conditioning characteristics of the sludge complement each other. The solid waste absorbs excess moisture from sludge and reduces leachate migration. Sewage sludge usually makes up 5 percent or less of the material in a solid waste landfill.

Slightly less than 3 percent of the sewage sludge generated is disposed of in monofills (landfills only accepting sewage sludge). EPA has identified approximately 320 POTWs that dispose of their sewage sludge in monofills. Most monofills consist of a series of trenches, dug into the ground, into which dewatered sludge is deposited and then covered with soil. Other monofill designs, in which the sludge is deposited on the ground surface (area fill mounds, area fill layers, and diked containment), do exist but are not commonly used.

Incineration

Incineration is a method of disposal that destroys the organic pollutants and reduces the volume of sewage sludge. Incineration takes place in a closed device using a controlled flame. EPA estimates that approximately 0.9 million dry metric tons of sewage sludge are incinerated each year, accounting for more than 16 percent of the sewage sludge disposed of by POTWs.

If the sewage sludge contains 20 percent solids, incinerators reduce the volume of sewage sludge by about 90 percent, on a wet weight basis. While this reduces the amount of material that must be landfilled, owners or operators must control the concentration of the pollutants in the incinerator emissions to prevent exacerbation of a community's air pollution control problems. They must also allocate sufficient funds to pay for the labor, capital, operating, and maintenance costs of sewage sludge incinerators.

Approximately 110 (52 percent) of the sewage sludge incinerators operated by secondary and advanced treatment works in the United States were built prior to 1973, when the New Source Performance Standards for Sewage Sludge Incinerators were published (40 CFR part 60, subpart O). Multiple hearth incinerators are the most commonly used sewage sludge incinerators with 156 multiple hearth incinerators (74 percent firing sewage sludge). Other types include 49 fluidized bed incinerators (23 percent of the total), 3 flash drying incinerators, and 2 electric furnaces. A description of these incinerators is included in the Technical Support Document for Incineration (Reference No. 100).

The total estimated volume of sewage sludge fired in incinerators operated by POTWs in 1988 was approximately 860,000 dry metric tons. Not represented in this estimate are incinerators which fire sewage sludge with solid waste in municipal waste combustors. The Agency estimates that seven facilities practice co-incineration of sewage sludge with municipal solid waste.

Part II: Federal and State Requirements

The use or disposal of sewage sludge is currently subject to some Federal regulation. Existing Federal regulations are authorized under several statutes and have been developed independently along media-specific concerns. State regulations generally are keyed to Federal regulatory requirements, primarily those in 40 CFR part 257, covering the land application and landfilling of sewage sludge, and those in 40 CFR part 60, subpart O, covering sewage sludge incinerators.

This part starts with a discussion of the requirements of the CWA, followed by a description and summary of other Federal and State regulatory requirements and how they relate to today's rule.

Clean Water Act Statutory Requirements

Sewage sludge has been an important concern of the Agency since 1972, when EPA, through the Federal Water Pollution Control Act construction grants program, began assisting in the financing of wastewater treatment facilities. The Clean Water Act of 1977 amended section 405, mandating that EPA develop guidelines for the use and disposal of sewage sludge. As previously explained, under section 405(d), EPA was required to issue regulations that:

(1) Identify uses for sewage sludge, including disposal;

(2) Specify factors to be taken into account in determining the measures and practices applicable to each such use or disposal (including publication of information on costs); and

(3) Identify concentrations of pollutants which interfere with each such use or disposal.

Responding to this mandate, in 1979, EPA adopted criteria that provided guidelines for sewage sludge use and disposal when sewage sludge was applied to land or disposed of in landfills. These criteria were included in regulations co-promulgated under Subtitle D of RCRA and section 405(d) of the CWA and are found in 40 CFR part 257. These regulations contain a number of specific requirements for the management of sewage sludge. To protect the ground water, the regulations prohibit any use or disposal of sewage sludge that causes the concentration of 10 heavy metals and 6 organic chemicals in an underground drinking water source to exceed maximum contaminant levels (MCLs) specified in the criteria. The criteria also included management standards applicable to sewage sludge use or disposal methods to protect surface waters, flood plains, and endangered species. The criteria contain limitations on the concentration of two pollutants (cadmium and PCBs) in sewage sludge when the sewage sludge is applied to the surface of land used for the production of animal feed or food-chain crops. In addition, the requirements in part 257 restrict sewage sludge use and disposal except in compliance with certain measures to control pathogens and disease-carrying rodents, insects, and birds. The regulation provided for different levels of pathogen reduction, depending on whether crops for direct human consumption were grown or animals for human consumption were allowed to graze on the sewage sludge-amended soil. The processes for reducing the levels of pathogens include aerobic and anaerobic digestion, composting, lime stabilization, and heat treatment and drying.

As part of its sludge regulatory program, EPA has prepared a number of documents which provide guidance and direction to local POTWs on the proper management and handling of sewage sludge. EPA has actively encouraged and assisted in the development and implementation of various practices and processes leading to the beneficial use of sewage sludge. In addition to supporting long-term research and demonstration projects, the Agency has also assisted in the development of detailed design guidance for various beneficial methods of disposal and such technologies as digestion, composting, and lime stabilization. The Agency has also supported development of improved de-watering systems, pyrolysis, and other technologies to improve energy recovery from thermal conversion systems, methane recovery from anaerobic digestion systems, and the recovery of various potentially marketable by-products from sewage sludge.

To aid in developing the comprehensive sewage sludge regulations promised in the preamble to the 40 CFR part 257 rule (44 FR 53439, September 13, 1979), EPA created an Intra-Agency Sludge Task Force in 1982. The task force was assigned the following tasks: (1) Conduct a multimedia examination of sewage sludge management, focusing on sewage sludge generated by POTWs; and (2) develop a cohesive Agency policy on sewage sludge management, designed to guide the Agency in implementing sewage sludge regulatory and management programs. Numerous Agency offices and *ad hoc* groups had wrestled with sewage sludge management, but none of these groups had been able to decide how to equitably regulate nationally a complex and variable waste in an environmentally protective and cost-effective manner. Sewage sludge use or disposal involved a myriad of site-specific circumstances, could result in multimedia effects, and depended on proper planning and decision-making at the local level. The Agency lacked experience in developing performance standards for solid waste that would attenuate multimedia environmental effects. Furthermore, at that time, Congress had not provided a compliance mechanism for the regulations.

The task force, which included representatives from all parts of the Agency, recommended that the Agency develop an integrated, comprehensive regulatory structure for sewage sludge use or disposal using the combined authorities of section 405 of the CWA and other laws. This structure would also incorporate existing regulations and, where appropriate, new regulations to complete regulatory coverage where important gaps remained.

While the Agency was working on a regulatory approach consistent with the recommendations of the Task Force, the Natural Resources Defense Council sued the Agency over EPA's pretreatment regulation (40 CFR part 403). In that suit, the U.S. Court of Appeals for the Third Circuit ruled that the pretreatment regulation was invalid in four respects. [*Natural Resources Defense Council* v. *EPA*, 790 F.2d 289 (3rd Cir. 1986)]. Most relevant here is the court's fourth holding:

> We hold that, despite EPA's contention that sludge regulations are in place, EPA's device of incorporating other regulations does not meet the statute's command for a comprehensive framework to regulate the disposal and utilization of sludge and that EPA cannot, in the absence of section 405(d) regulations authorize the issuance of removal credits under section 307(b)(1).

Throughout its lengthy consideration of the amendments to the CWA, some members of Congress expressed concern that, without sewage sludge regulations, industry would continue to discharge toxic pollutants into wastewater for POTWs to treat, making it more difficult for a city to find sewage sludge management alternatives. They believed sludge criteria would stimulate effective pretreatment programs and would encourage recycling and reuse of toxic pollutants by industry. In the Water Quality Act of 1987 (Pub. L. 100–4, February 4, 1987), Congress reaffirmed its directive that EPA develop comprehensive sewage sludge regulations and set forth a schedule for the Agency to do so. The Water Quality Act amended section 405(d) to include requirements that:

(1) By November 30, 1986, EPA propose regulations establishing numerical limits and acceptable management practices for toxic pollutants that EPA identified as present in sewage sludge in concentrations which, on the basis of information available on their toxicity, persistence, concentration, mobility, or potential for exposure, may adversely affect public health or the environment;

(2) By August 31, 1987, EPA promulgate regulations specifying acceptable management practices and establishing numerical limits for these pollutants that "shall be adequate to protect public health and the environment from any reasonable anticipated adverse effects of each pollutant";

(3) By July 31, 1987, EPA identify and propose regulations for those toxic pollutants not identified in the regulations promulgated August 31, 1987, and promulgate regulations for those toxic pollutants by June 15, 1988; and

(4) From time to time, but no less often than every two years, EPA review the regulations for the purpose of identifying additional toxic pollutants and promulgating regulations.

The amendments specify that compliance with the regulations' requirements must occur not later than 1 year after publication of the regulations, unless the regulations require the construction of new pollution control facilities. In this latter case, compliance must occur no later than 2 years from the date of publication of the regulations.

Section 405(d)(5) also provides that nothing in the section is intended to waive more stringent requirements in the CWA or in any other law. This means that States and local communities remain free to impose more stringent requirements than those

included in today's rule. In addition, as described later in the preamble, where EPA has established requirements applicable to sewage sludge under other statutes, compliance with regulations established under those statutes also constitutes compliance with part 503.

Section 405(e) was further amended to read as follows:

> The determination of the manner of disposal for use of sludge is a local determination, except that it shall be unlawful for any person to dispose of sludge from a publicly owned treatment works or any other treatment works treating domestic sewage for any use for which regulations have been established pursuant to subsection (d) of this section, except in accordance with such regulations.

The implications of this section are discussed later in the preamble.

CERCLA Liability

Questions have been raised about conditions under which sewage sludge disposed at a Superfund site might give rise to liability under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Section 107 of CERCLA generally imposes liability for cleanup costs on, among others, persons who own or operate facilities at which hazardous substances are disposed. Section 107 liability extends to the costs of cleanup necessitated by a release or threat of release of a hazardous substance. However, section 101(22) defines "release" to exclude the "normal application of fertilizer."

If the placement of sludge on land were considered to be "the normal application of fertilizer," that placement could not give rise to liability under CERCLA. Today's rule, as previously noted, establishes standards for sewage sludge when applied to the land for a beneficial purpose (i.e., as a fertilizer substitute or soil conditioner). Sludge placed on the land for such beneficial purpose and applied in compliance with the requirements for land application of sewage sludge provided in §§ 503.13(b) (2) and (4), § 503.14 and § 503.15 (where applicable) of the final rule today, and in accordance with accepted agricultural practices using appropriate application rates, which constitutes the normal application of fertilizer, does not constitute a "release."

Under CERCLA, protection from liability is also provided when there is a release of a CERCLA hazardous substance and the release occurs pursuant to Federal authorization. Thus under CERCLA, in defined circumstances, the application of sewage sludge to land in compliance with a permit required by section 405 of the Clean Water Act is a Federally permitted release as defined in CERCLA. Recovery for response costs or damages under section 107 of CERCLA is not authorized for Federally permitted releases. The Act defines Federally permitted releases as, among others, discharges in compliance with an NPDES permit under section 402 of the Clean Water Act. (See, *Idaho* v. *Hanna Mining Co.* 699 F. Supp. 827 (D. Idaho 1987) (State cannot recover under CERCLA for damages resulting from releases authorized by NPDES permit) *aff'd*, 882 F.2d 392 (9th Cir. 1989)). Consequently, releases of hazardous substances from the land application of sewage sludge authorized under and in compliance with an NPDES permit would constitute a Federally permitted release.

Other Federal Requirements

Traditionally, the Agency has used the standards, definitions, and approaches developed under other Federal public health and environmental programs in responding to the broad mandate of section 405(d) when they are consistent with the goals and objectives of the CWA. The use of other Federal standards is desirable in order to minimize duplicative, overlapping, and conflicting policies and programs. Further, as discussed above, section 405(d)(5) provides that nothing in section 405(d) is intended to waive more stringent requirements established under other statutes. Therefore, as previously indicated, in developing today's rule EPA based pollutant limits on human health or environmental criteria established under other statutory authorities.

Under section 304(a) of the CWA, the Agency publishes Water Quality Criteria. For the purposes of part 503, these criteria are used in determining whether a pollutant limit for a particular use or disposal practice would not exceed a freshwater quality criterion, should the pollutant reach the surface water. When the concern is to protect the drinking water supplies, the basis of the pollutant limits is the MCLs promulgated under authority of the Safe Drinking Water Act.

The NAAQS for lead, promulgated under authority of section 109 of the Clean Air Act, was used in developing the pollutant limit for lead when sewage sludge is incinerated. The National Emission Standards for Hazardous Air Pollutants (NESHAPs) for beryllium and mercury, used in the part 503 proposal to develop the numerical pollutant limits for these pollutants when sewage sludge is incinerated, have been omitted from the final part 503 regulations because these pollutants are already regulated under the authority of section 112 of the Clean Air Act and found at 40 CFR part 61. Other applicable regulatory requirements for the incineration of sewage sludge include the New Source Performance Standards for Sewage Sludge Incinerators promulgated under section 111 of the Clean Air Act and found at 40 CFR part 60, subpart O. Owners or operators of sewage sludge incinerators also must ensure that their operations, including the location of new incinerators, conform to state implementation plans approved under the regulations authorized by section 110 of the Clean Air Act and are found at 40 CFR parts 50–51.

State Requirements

The information on existing State requirements summarized below was gathered as part of EPA's effort in developing guidance for writing sewage sludge interim permits prior to promulgation of the part 503 standards. Under section 510 of the CWA, States, political subdivisions of States and interstate agencies retain the authority to adopt or enforce more stringent standards than those provided in today's part 503 regulations.

At present, 42 States have regulations or guidelines covering the land application of sewage sludge which set either a maximum allowable concentration or maximum pollutant loading rate for at least one pollutant. Paralleling the requirements in 40 CFR part 257, 41 States have set restrictions on the growing of crops on soil to which sludge has been applied (e.g., human food chain crops cannot be grown on sludge-amended soil until 18 months after the application of the sewage sludge). In addition, 41 States have established management practices for the land application of sewage sludge.

The give-away or sale of composted sludge is regulated under State land application requirements. Eleven States have set numerical limits on the concentration of pollutants in sewage sludge that is distributed and marketed and 22 States have established management practices regulating this use.

Many States enforce landfilling restrictions for nonhazardous sludge that follow the requirements in 40 CFR part 257. While States have not set maximum pollutant concentrations for sewage sludge that is landfilled, 31 States do have some site restrictions or other management practices governing landfills.

Many States regulate the emissions of sewage sludge incinerators. State implementation plans under the Clean Air Act limit emissions of various pollutants subject to NAAQS or NESHAPs. Twenty States have established opacity limits as well as emission limits for beryllium, mercury, particulates, sulfur dioxide, and carbon monoxide. No State has established a limitation on lead emissions from sewage sludge incinerators. Twenty-nine States have regulations or guidelines governing operation of incinerators, including disposal of ash.

In one State, the development and enforcement of controls on all methods of sewage sludge use and disposal are delegated entirely to local agencies, as is the issuance of permits. In other States, local as well as State controls are imposed on the use and disposal of sewage sludge.

Part III: Selection of Pollutants Considered for Regulation

This part describes how the Agency selected the initial list of pollutants for which numerical limits are promulgated in today's rule and data bases used to collect information about the pollutants. Additional information may be found in "The Record of Proceedings on the OWRS Municipal Sewage Sludge Committees" and "Summary of the Environmental Profiles" (Reference Nos. 62 and 67).

Initial List of Pollutants

In the spring of 1984, EPA enlisted the assistance of Federal, State, academic, and private sector experts to determine which pollutants likely to be found in sewage sludge should be examined closely as possible candidates for numerical limits. These experts screened a list of approximately 200 pollutants in sewage sludge that, if disposed of improperly, could cause adverse human health or environmental effects. The experts were requested to revise the list, adding or deleting pollutants. The test for inclusion or exclusion was the potential risk to human health and the environment when sewage sludge containing a particular pollutant was applied to the land, placed in a landfill, or incinerated. The Agency also requested that the experts identify the most likely route which a pollutant could travel to reach target organisms, whether human, plant, or wild or domestic animals. The experts attending the meetings recommended that the Agency gather additional environmental information on approximately 50 pollutants. These pollutants are listed in Table III–1.

TABLE III–1.—POLLUTANTS SELECTED FOR ENVIRONMENTAL PROFILES/HAZARDS INDICES

Pollutants	Land application	Landfill	Incineration
Aldrin/Dieldrin	X		X
Arsenic	X	X	X
Benzene		X	X
Benzidine			
Benzo(a)anthracene	X		X
Benzo(a)pyrene	X	X	X
Beryllium			X
Bis(2-ethylhexyl) phthalate	X	X	X
Cadmium	X	X	X
Carbon tetrachloride			X
Chlordane	X	X	X
Chlorinated dibenzodioxins			X
Chlorinated dibenzofurans			X
Chloroform			X
Chromium	X	X	X
Cobalt	X	X	
Copper	X	X	X
Cyanide	X	X	
DDT/DDD/DDE	X	X	X
3,3'-Dichlorobenzidine			
2,4-Dichlorophenoxy-acetic acid		X	X
Dimethylnitrosamine	X		
Fluoride	X		
Heptachlor	X		X
Hexachlorobenzene	X		
Hexachlorobutadiene	X		
Iron	X		
Lead	X	X	X
Lindane	X	X	X
Malathion		X	X
Mercury	X	X	X
Methylene bis(2-chloroaniline)	X		
Methylene chloride	X	X	X
Methylethyl ketone		X	
Molybdenum	X	X	
Nickel	X	X	X
PCBs	X	X	X
Pentachlorophenol	X		X
Phenanthrene		X	X
Phenol			X
Selenium	X		
Tetrachloroethylene			X
Toxaphene	X	X	X
Trichloroethylene	X		X
Trichlorophenol			X
Tricresyl phosphate	X		
Vinyl chloride			X
Zinc	X	X	X

Environmental Profiles

During 1984 and 1985, the Agency collected data and information from published scientific reports on the toxicity, persistence, means of transport, and environmental fate of these 50 pollutants. EPA also developed preliminary information on their relative frequency of concentration in sewage sludge by analyzing the sewage sludge of 43 to 45 POTWs (depending on the pollutant) in 40 cities ("Fate of Priority Pollutants in Publicly Owned Treatment Works"—the "40 City Study"—Reference No. 60). The sewage sludge data from the "40 City Study" consist of concentrations of 40 pollutants (12 metals, 6 base neutral organic compounds, 6 volatile organic compounds, 9 pesticides, and 7 PCBs) in sewage sludge analyzed from the target POTWs.

Using this preliminary information on the relative frequency and concentration of pollutants in sewage sludge, their toxicity and persistence, the pathways by which the pollutants travel through the environment to a receptor organism (plant, animal, or human), the mechanisms that transport or bind the pollutants in the pathway, and the effects of the pollutants on the target organism, EPA made an assessment of the likelihood that each pollutant would adversely affect human health or the environment. For this analysis, EPA relied on simple screening models and calculations to predict the concentration of a pollutant that would occur in surface or ground water, soil, air, or food. EPA then compared the predicted concentration with an Agency human health criterion, such as a drinking water standard promulgated under the Safe Drinking Water Act, to determine whether the pollutant could be expected to have an adverse effect on human health. For purposes of this initial screening, EPA assumed conditions that would maximize the pollutant exposure of an individual, animal, or a plant, as well as the worst possible pollutant-related effects.

Based on the factors previously listed (concentration, toxicity, persistence, and others), EPA scored each pollutant and ranked them for more rigorous analysis. EPA excluded two categories of pollutants for further evaluation. First, EPA excluded pollutants which, when compared to a simple index, presented no risk to human health or the environment at the highest concentration that the Agency found in the "40 City Study" or in other available data bases. Second, EPA deferred consideration of pollutants for which EPA lacked human health criteria or sufficient data.

Information on each pollutant, the simple screening models and calculations used to describe the pollutant's path through the environment, and the indices used to evaluate the pollutant are compiled in an environmental profile for each pollutant. The summary of the environmental profiles is listed as Reference No. 64 in part XIV of the preamble.

Table III–2 shows the pollutants EPA did not analyze further because the pollutant did not exceed an EPA human health or environmental criterion at the highest concentrations shown in the "40 City Study." The pollutants listed in Table III–2 are also included in the list of pollutants for which eligible POTWs, complying with the requirements in part 503, may under 40 CFR part 403, apply for authorization to grant removal credits to their industrial dischargers (see Part XV—Description of the Amendments to 40 CFR Parts 257 and 403).

Table III–3 shows the pollutants for which a lack of data at the time of developing these regulations precluded the Agency from promulgating numerical limits at this time.[1] Included on the list in Table III–3 is dioxin. When EPA initiated these pollutant assessments in 1984, the Agency did not include dioxin as a pollutant evaluated for this rule. At that time, EPA lacked the data required to assess numerical limitations for dioxin in sewage sludge. In addition, adequate data were not available on the levels of dioxin or its pervasiveness in sewage sludge.

TABLE III–2.—POLLUTANTS EVALUATED AND FOUND NOT TO INTERFERE WITH SEWAGE SLUDGE USE OR DISPOSAL

Pollutants	Use/disposal practice (concentration)
Chlordane	Monofill over Class II, III ground water (12 mg/kg).
Chromium	Monofill over Class II, III ground water (1,499.7 mg/kg).
Copper	Incineration (1,427 mg/kg).
Cyanide*	Land Application, Distribution and Marketing, Monofill (2,686.6 mg/kg).
Dimethyl nitrosamine*	Distribution and Marketing (2.55 mg/kg).
2,4–Dichlorophenoxy-acetic acid	Monofill (7.16 mg/kg).
Fluoride*	Land Application, Distribution and Marketing (738.7 mg/kg).
Heptachlor	Incineration (0.09 mg/kg).
Iron*	Land Application, Distribution and Marketing (8,700 mg/kg).
Malathion	Monofill (0.63 mg/kg).
Molybdenum	Monofill (40 mg/kg).
Nickel	Monofill over Class II, III ground water (662.7 mg/kg).
Pentachlorophenol	Land Application, Distribution and Marketing (30.43 mg/kg).
Phenol	Monofill (82.06 mg/kg).
Selenium	Monofill, Incineration (4.85 mg/kg).
Tetrachloroethylene*	Distribution and Marketing (13.07 mg/kg).
Zinc	Monofill, Incineration (4,580 mg/kg)

*Exposure assessment models were used in determining that these pollutants, at the concentrations shown, do not interfere with the use or disposal of sewage sludge.

[1] Some of the organic pollutants for which development of regulatory limits were deferred are, in fact, regulated in this rule. As explained, incinerator organic pollutant emissions are limited by an operational standard for total hydrocarbons. Thus, because the emissions of total hydrocarbons are regulated, emissions of the following Table III–3 pollutants are, in actuality, regulated in the final rule: benzo(a)anthracene, phenanthrene and vinyl chloride.

TABLE III–3.— POLLUTANTS DEFERRED BECAUSE OF INSUFFICIENT DATA

Pollutants	Use/Disposal Practice
Benzo(a) anthracene	Land Application, Distribution and Marketing, Incineration.
Bis(2-ethylhexyl) phthalate.	Distribution and Marketing.
Chlorinated dibenzo-dioxins.	Land Application, Distribution and Marketing, Monofills.
Chlorinated dibenzo-furans.	Land Application, Distribution and Marketing, Monofills.
Cobalt	Land Application, Distribution and Marketing, Monofills.
Methylene bis (2-chloroaniine).	Land Application, Distribution and Marketing.
Methylene chloride	Land Application, Distribution and Marketing, Monofills.
Methylethyl ketone	Monofills.
Pentachlorophenol	Land Application, Distribution and Marketing.
Phenanthrene	Monofills, Incineration.
Tricresyl phosphate	Land Application, Distribution and Marketing.
Vinyl chloride	Incineration.

The Agency did not analyze sewage sludge for dioxins as part of the "40 City Study" because, at the time the samples were collected (1979–1980), methodologies did not exist for analyzing trace quantities (parts per trillion) of dioxins in sewage sludge. Since better analytical methods now exist, the Agency has collected sewage sludge samples for dioxins analyses as part of the National Sewage Sludge Survey (NSSS) (see discussion below).

EPA will use the NSSS data and the results of recent scientific studies to complete its analysis of dioxins in sewage sludge—a likely candidate for regulation in the second round of sewage sludge regulation. In the interim, as explained later in the preamble, the Agency is limiting the emission of dioxins from sewage sludge incinerators by establishing operating standards for total hydrocarbons.

Part IV: February 6, 1989 Proposed Rule

This part describes the sewage sludge use and disposal standards EPA proposed in February, 1989. In that notice, EPA proposed to include septage from septic tanks in the definition of sewage sludge and thus within the scope of the proposed requirements. A more detailed explanation of the proposed rule is found at 54 *FR* 5746, 5791–5855 (February 6, 1989).

The proposed standards included numerical pollutant limits, management practices, and other requirements that defined a level of control which owners or operators of treatment works and users or disposers of sewage sludge must attain over the use or disposal of sewage sludge in order to protect human health and the environment. EPA proposed pollutant limits, management practices, and other requirements that were specific to the method of use or disposal employed by treatment works use.

EPA proposed requirements that owners or operators of treatment works and users or disposers of sewage sludge would have to meet whenever they ultimately used or disposed of the sludge. The use or disposal methods included in the proposal were: (1) application to agricultural or non-agricultural land, (2) distribution and marketing (now referred to as sale or give-away of sewage sludge), (3) disposal in monofills, (4) disposal on surface disposal sites, and (5) incineration. EPA did not propose separate standards for septage from septic tanks. Rather, septage, when used or disposed of by any method regulated under the proposal (e.g., applied to land, placed in a monofill or surface disposal site) would have to meet the applicable requirements in the same manner as those for sewage sludge.

Land Application

EPA proposed standards for the spreading of liquid, de-watered, dried, or composted sewage sludge on or just below the surface of agricultural and non-agricultural land. Sewage sludge applied to agricultural land was subject to different numerical pollutant limits from those limits proposed for sludge applied to non-agricultural lands.

EPA based the numerical limits for sewage sludge when applied to agricultural land on a modelled assessment of potential risk to public health and the environment through 14 pathways of exposure. The numerical limits for sewage sludge when applied to agricultural land were expressed in terms of a limitation on the cumulative loading of 10 metals and an annual pollutant loading of 12 organic pollutants. The cumulative loading rate for each of the metals represented the limit on how much of a given metal in sludge could be added to the soil. The additional "load" of the metal could be applied all at once or over a period of years from repeated applications of sludge. No further application of sludge containing the metal would be allowed, however, once the cumulative loading is reached. In addition, the proposed rule also limited, on an annual basis, the quantity of 12 organic pollutants that could be applied to land. In order to ensure that the cumulative loading level and annual pollutant rates would not be exceeded, the proposal required owners and operators of treatment works to keep records on the amount of organic and inorganic pollutants applied to each land application site. In addition, before sewage sludge could be applied to the land by any one other than the treatment works, under the proposal the treatment works would have to enter into an agreement with the distributor or applier of the sludge to provide that they must comply with the standards.

In the case of non-agricultural land, EPA developed pollutant ceilings for the concentration in sewage sludge of these 22 organic and inorganic pollutants. The standards were premised on the assumption that pollutants in sludge applied to non-agricultural land would not reach individuals through the food chain. The ceiling concentrations were based on 98th-percentile values for pollutant concentrations in municipal sewage sludge based on data from a 1981–82 study.

Distribution and Marketing

Different requirements were proposed for sewage sludge which is distributed and marketed—what is now denominated sludge that is sold or given away—for use as a fertilizer and soil conditioner for potting medium, lawns, ornamental plants and gardens. In the case of distributed and marketed sludge, the Agency proposed to limit the quantity of sludge (or a product derived from the sludge) of a given concentration that could be applied to land in one year. When a treatment works was not the distributor of the sludge or sludge product, the proposal required an agreement between the distributor and treatment works to ensure compliance with the requirements.

An important difference between the proposed land application requirements and the proposed distribution and marketing requirements was in the numerical limits for some of the organic pollutants and some metals. In the exposure assessment pathway scenarios for both, it was assumed that the sewage sludge is used in the production of crops intended for human consumption. The numerical limits for the application of sewage sludge to agricultural land were based on crops intended for direct human consumption or fed to animals intended for direct human consumption, whichever was the more stringent loading rate. For the organic pollutants, which tend to bioaccumulate through the food chain, the limiting numerical limit was based on crops fed to animals intended for human consumption. However, the distribution and marketing scenario was designed to protect a fruit and vegetable home garden, not a garden in which feed is raised for animals intended for human consumption. Therefore, the numerical limits for organic pollutants in

distribution and marketing tended to be higher than those for agricultural land application.

Another major difference in the proposed requirements between the land application standards and the distribution and marketing standards was that for the land application requirements to apply, as noted, there had to be an agreement between the treatment works and the distributor or applier of the sewage sludge to abide by the requirements, such as the access and use restrictions. In the absence of an agreement, the proposal required the treatment works to comply with the requirements for the distribution and marketing standards.

Monofills

EPA also proposed requirements that would apply to landfills receiving only sewage sludge (monofills) and any person disposing of sewage sludge in a monofill. EPA developed numerical limits on the concentration of 16 pollutants in sludge that could not be exceeded if the sludge was disposed of in a monofill. These limits, derived from a modelled exposure pathway analysis, would vary depending the type of ground water under the unit. Moreover, the proposal provided for the determination of site-specific limits for monofills in defined circumstances.

Surface Disposal

In addition to the disposal of sewage sludge in sludge-only landfills, EPA also developed standards for another widely practiced means of sludge land disposal. EPA called this disposal method "surface disposal"—typically piles of sludge placed on the land—and defined them as areas of land where sludge is placed for a year or longer. Because EPA concluded that surface disposal sites are generally small and in rural areas, these sites did not expose individuals to significant concentrations of pollutants. EPA proposed pollutant concentration limits for sludge placed on a surface disposal site based on the 98th-percentile values derived from the data on sewage sludge quality. The effect of using 98th-percentile data was to cap pollutant concentrations at the level of quality represented by the data base. EPA concluded that this would protect public health and the environment because analysis of aggregate effects of sewage sludge use and disposal showed a low incidence of adverse health effects associated with this method of disposal. Because surface disposal and monofills shared a number of common characteristics, where the most stringent numeric monofill limits exceeded the 98th-percentile concentration, these were substituted for the 98th-percentile concentrations.

In addition, because of the similarity of surface disposal to non-agricultural land application of sludge and to monofills, EPA committed to revisiting for the final rule the issue of whether distinguishing these different use and disposal methods was appropriate. Furthermore, EPA committed to develop exposure assessment models to evaluate potential risk to health and the environment from surface disposal units for the final rule.

Pathogen and Vector Attraction Reduction Requirements

As noted, sewage sludge typically includes contaminants like bacteria, viruses, protozoa and helminth ova. These organisms can cause diseases, usually enteric diseases through direct human contact with the organism or through the ingestion of an infected animal. These contaminants may be spread by birds, rats and other animals exposed to them. The proposal included requirements for control of the pathogens in sludge as well as measures for reducing the contact of the disease "vectors" with the sludge pathogens. The proposal included pathogen reduction and vector attraction reduction requirements for sewage sludge that is applied to agricultural and non-agricultural land, distributed and marketed or disposed of on a monofill or surface disposal site.

In the proposal, treatment works could use any one of three levels of pathogen reduction when sewage sludge is applied to either agricultural or non-agricultural land as long as the treatment works or applier complied with the applicable restrictions on public access to the land and on growing crops or raising animals on the sludge-amended soil. In addition, two sets of numerical limits were included in this part. The applicability of these limits depended on whether the sewage sludge is used in the production of crops intended, directly or indirectly, for human consumption or for animals raised for human consumption.

One key difference between the proposed requirements of subpart B (land application) and subpart C (distribution and marketing) was the level of pathogen reduction in sludge required for a treatment works. Under the proposal, treatment works that distribute and market their sewage sludge to the general public had to process their sludge to attain the highest level of pathogen reduction provided. In contrast, the land application subpart of the proposal allowed a treatment works the option of selecting alternative pathogen reduction standards as long as the landowner imposed public access and animal grazing controls and restricted the growing and harvesting of crops in accordance with the standards of the class of pathogen reduction selected.

In developing the requirements for the land application of sewage sludge, the Agency assumed that, except for the applier, there would be little public contact with the sewage sludge itself or with the land receiving the sewage sludge. EPA also assumed that public access restrictions could be imposed on either agricultural or non-agricultural land for a period of time. The underlying premise in developing sewage sludge distribution and marketing requirements was that the sludge would be used in a home garden where there would be immediate and continuous human contact with the sewage sludge or with the land receiving it. Under such circumstances, the Agency could not restrict access.

Incineration

EPA proposed the following requirements for sewage sludge that is incinerated in an incinerator firing only sewage sludge. First, the proposed rule required a sludge incinerator to comply with the National Emission Standards for Hazardous Air Pollutants for mercury and beryllium. Second, in the case of lead, arsenic, cadmium, chromium and nickel, the proposal established a limit on the sludge concentration of these metals that could be incinerated. That concentration would vary depending principally on two factors: The control efficiency of the incinerator, and the dispersion factor (i.e., the relationship between ground level concentrations and pollutant emissions). These limits were designed to ensure that ground level concentrations (called the "risk-specific concentration") for a given pollutant did not exceed a value associated with protection of human heath at a cancer risk level of 10^{-5}. In the case of lead, the standard was designed to ensure that the National Ambient Air Quality Standard for lead was not violated. For purposes of this calculation, sewage sludge incinerators were assigned 25 percent of the air-shed loading for lead.

Third, the February 6, 1989 notice proposed a limit for maximum allowable total hydrocarbon concentration in sewage sludge. Again, this limitation, like the metal limits would vary with dispersion factors and control efficiency. Similarly, it was designed to ensure that ground level concentrations of total hydrocarbon emissions from the incinerator stack

would not exceed a level associated with a cancer risk of 10^{-5}. In order to determine the risk-specific concentration for total hydrocarbons, EPA made a number of assumptions about which organic pollutants comprised the total hydrocarbon mixture and at what levels these organics were present.

Monitoring, Recordkeeping and Reporting

The proposal required owners and operators of treatment works to sample and analyze their sludge and keep certain records. The pollutants for which monitoring was required depended on the method of sludge use or disposal employed. The frequency of monitoring would vary with the design capacity of the treatment works. In addition, treatment works were to monitor the sewage sludge for compliance with the pathogen reduction requirements when the sludge was used or disposed of other than by incineration. Further, the proposal required owners or operators of sewage sludge incinerators to monitor continuously for incinerator stack hydrocarbon concentrations, sludge feed rate, combustion temperature, and oxygen content of the exit gas.

As noted, the proposal required an agreement between the treatment works and the distributor or land applier. The information needed for the proposed reporting requirements would be contained in these agreements. EPA proposed that treatment works applying sewage sludge to agricultural lands keep the records for the life of the treatment works to ensure that the cumulative pollutant loading rate is not exceeded for a particular parcel of land receiving sewage sludge.

The monitoring, recordkeeping, and reporting requirements proposed for non-agricultural lands were similar to those required for agricultural lands. One difference was that treatment works did not have to keep track of annual and cumulative pollutant loading rates. Therefore, retention was only required for 5 years.

The proposal required retention of the analytical data on sewage sludge concentrations and pathogen reduction for 10 years for monofills and for five years for surface disposal sites. Incinerator records under the proposal were required to be kept for 5 years.

Part V: November 9, 1990 Notice of Availability of Information and Data, and Anticipated Impacts on Proposed Rule

Subsequent to publication of the proposed part 503 regulation in the **Federal Register**, three data gathering efforts were undertaken to gather information for the final part 503 regulation. They include the National Sewage Sludge Survey, a sewage sludge incinerator study, and a domestic septage sample collection and analytical study. This part of today's preamble describes those efforts briefly.

Background

Public Comment and Scientific Peer Review

In the preamble to the part 503 proposal, the Agency solicited public comment on a wide range of issues including the fundamental principles of the rule, the carcinogenic risk levels used, other human health and environmental criteria that could be used in establishing the numerical limits, changes that may occur because of other Agency actions (e.g., changes in MCLs and air standards for lead), the models, the MEI and aggregate risk analyses, the anticipated benefits and costs of the rule, and data deficiencies. In addition, EPA committed to seek and support scientific peer review of the technical bases of the rulemaking package during the public comment period on the proposed rule (54 FR 5747):

> EPA will have experts from both inside and outside the Agency review the scientific and technical bases of the proposal. This review may include the Agency's Science Advisory Board, the Cooperative State Research Service, Regional Research Technical Committee (sometimes called the W–170 Committee), representatives of academia, and/or other scientific/technical bodies with expertise in the areas covered by this proposed rule. With the additional data and the scientific and technical review of the proposal, the Agency should be able to expand and refine the standards.

The Agency worked with two peer review groups during the public comment period to review in detail the scientific and technical bases of the proposed rule. These two peer review groups were as follows:

1. Land Practices Peer Review Committee—The land application, distribution and marketing, monofill and surface disposal provisions of the proposal were reviewed in depth by a specially convened group of sewage sludge experts. This group included many nationally known experts on sludge use and disposal including several members of the U.S. Department of Agricultural W–170 Committee and represented a broad diversity of views. A representative of the Natural Resources Defense Council served on this committee. The final report was officially submitted to EPA on July 24, 1989 (Reference No. 58). Members of the committee and their organizations volunteered their time for this effort. Contributions to travel expenses for committee members were provided by several outside organizations (Association of metropolitan Sewerage Agencies, Water Environment Federation).

2. EPA Science Advisory Board (SAB)—The SAB reviewed the technical bases of the sludge incineration regulations. In the past, various SAB committees have reviewed the technical bases of similar EPA incineration regulations, most notably municipal solid waste combustion and hazardous waste incineration. The final report was submitted on August 7, 1989 (Reference No. 97). A representative of the Natural Resource Defense Council served on this committee.

In addition to the two peer review reports, EPA received in excess of 5,500 pages of comments from 656 commenters during the 183-day public comment period on the proposed rule. The type and number of commenters are broken down as follows:

Municipalities	276
Industry	51
States	35
Septage haulers	36
Septage association	3
Consultants	34
Associations	29
Federal agencies	17
Individuals	16
Academic	13
Public interest	9
Congressional	72
Public hearing	63
Total:	656

The public and scientific peer review groups provided a comprehensive range of opinions, comments, and recommendations. Many of the comments were critical of the Agency's risk assessment methodology (stating it was overconservative for some use and disposal practices, and under conservative for others); the risk levels used by the Agency (questioning which risk levels are most appropriate, 10^{-4}/10^{-5} versus 10^{-6}); the selection of data and parameters used in the exposure assessment analyses (providing additional/better data and parameters); and the impacts the proposed rule would have on beneficial reuse of sewage sludge.

On November 9, 1990, EPA provided public notice of the availability of the National Sewage Sludge Survey data. That notice described some of the results of the survey. In addition, the notice contained information and data from the Sewage Sludge Incinerator Study and the Domestic Septage Study, and described the changes the Agency

was considering making to the proposed part 503 regulation as a result of these studies. Further, the notice requested comments on a number of changes to the use and disposal standards that were being considered for the part 503 proposal in light of the comments submitted earlier, peer review of the Agency's effort and new information developed since the February 8, 1989 proposal. (55 FR 47210–47823).

The 60-day public comment period for the notice closed on January 8, 1991. During that time, the Agency received more than 1,000 pages of comments from 153 commenters. Many of the comments made by the commenters supported the changes identified in the notice as revisions that the Agency was considering for the final part 503 rule.

Need for Information on Current Sewage Sludge Quality and Use and Disposal Practices

The "40 City Study" Data Base

As required by section 405(d), EPA relied on available information in developing proposed 40 CFR part 503. The primary source of information on the occurrence and concentration of pollutants in sewage sludge was determined from analyzing data on 40 pollutants from POTWs in 40 cities ("40 City Study"—Reference No. 60).

As discussed earlier, at the time of proposal the Agency relied on the "40 City Study" data as the primary source of information on the pollutant concentrations in municipal sewage sludge. The "40 City Study" provided the most comprehensive and best documented nationwide data base on the concentrations of pollutants in sewage sludge. Consequently, EPA concluded these data were an appropriate basis for developing the proposal. However, EPA recognized several deficiencies in using the "40 City Study" data. Key among them was the fact that data on final processed sewage sludge was generally not available from the "40 City Study." Further, the procedure used to select POTWs in the "40 City Study" did not follow the statistical methods required to support unbiased national estimates of pollutant concentrations in POTW sewage sludge.

The study was designed not to measure pollutant concentrations in the sewage sludge leaving a POTW, but to determine what happened to section 307(a)(1) priority toxic pollutants in POTWs employing secondary or advanced treatment. The study approach required that some sewage sludge samples be taken at points within the POTW prior to final sewage sludge processing in order to account for organic pollutants that may be transformed into more elementary compounds or gases before final sewage sludge processing, as in anaerobic digestion. However, the study did include information that enabled the Agency to estimate the dry weight concentrations of pollutants in POTW sewage sludge.

Another deficiency of the data from the "40 City Study" is that they are not current. Sewage sludge quality had changed since 1978, because of the initiation of many pretreatment programs, development of new industrial facilities discharging wastewater to the POTW, and changes in wastewater treatment processes. Therefore, pollutant concentrations from the "40 City Study" did not reflect the current quality of sewage sludge. Moreover, analytical method advancements since the "40 City Study" allow for more accurate analyses of pollutants in the presence of suspended solids.

Although other sources of data on sewage sludge quality existed, these also suffered from deficiencies rendering them unsuitable for regulatory purposes. Some data were drawn from too narrow a geographic area or were drawn from POTWs of a particular size. Frequently, these data were not collected systematically and different sampling and analytical protocols were used in the same survey. In addition, many of these other data were collected prior to the "40 City Study" data.

While EPA believed that the "40 City Study" data were the appropriate data to use in developing the proposed part 503 regulations, EPA concluded the data needed to be replaced, or at a minimum, be supplemented to support the final regulations. Therefore, EPA undertook the NSSS to obtain a current and reliable data base for developing the final part 503 rule. This data base, as previously explained, will also be used in developing a list of pollutants from which the Agency will select additional pollutants for further analyses and potential regulation under section 405(d) of the CWA.

The NSSS data collection effort began in August 1988 and was completed in September 1989. EPA collected sewage sludge samples at 180 POTWs and analyzed them for more than 400 pollutants. In addition, through the use of detailed questionnaires, the survey collected information on sewage sludge use and disposal practices from 475 public treatment facilities with at least secondary treatment of wastewater. The results of the NSSS have provided EPA current data and information essential to establishing numerical pollutant limits in the final part 503 rule that will encourage the beneficial reuse of sewage sludge and provide a greater degree of public health and environmental protection than the February 6, 1989, proposal.

The National Sewage Sludge Survey

The NSSS, a massive undertaking, was conducted to obtain credible analytical data in order to characterize the quality of final process sewage sludge (55 FR 47210, November 9, 1990). These data were used to develop national estimates for the probability distribution of pollutant concentrations in sewage sludge. The estimates of pollutant distribution were used in developing the regulatory impact analysis for the final part 503 rule. EPA augmented sewage sludge quality data with information concerning sewage sludge generation and treatment processes, current and alternative sewage sludge use and disposal practices, and treatment and disposal cost data. These data, from a national sampling of POTWs employing secondary or advanced treatment of wastewater, were necessary for a number of essential analyses required for promulgating the final part 503 regulations including the aggregate risk analysis (ARA) and the regulatory impact analysis (RIA) which project the benefits and expected effects associated with the final part 503 rule. The ARA and the RIA are discussed later in part XIII.

In establishing numerical limits, pollutant concentration data from the NSSS were required to estimate the level of risk posed by current sewage sludge quality and current use or disposal practices. EPA also used the data from the survey to test the reasonableness of its analyses and regulatory approach. Some areas of earlier concern included the accuracy of anticipated risks and analyzed characteristics of increased incidence of chemically induced disease in proximity to particular use or disposal practices. The survey information assisted the Agency in further evaluating its regulatory approach and in capping those pollutants at the 99th-percentile pollutant concentration where the Agency believes the strictly risk-based numerical limitations do not provide an adequate margin of safety to protect public health and the environment.

The results of the survey were also used to assess the potential shifts among the various use or disposal practices as a result of the final regulations. The effect of the rule is an important

element in determining how rapidly to implement the regulations. For instance, if there is likely to be only a slight impact from a particular numerical limitation, immediate implementation of the regulations may be appropriate. If, on the other hand, wide shifts in current methods of use or disposal are anticipated from the numerical limits, the POTWs may need assistance in developing more stringent pretreatment limits for their industrial dischargers or in the adoption of alternative use or disposal practices.

In addition, EPA will study the analytical results of the NSSS to identify a preliminary list of pollutants for second round rulemaking. Potential candidate pollutants are those that have elevated concentrations in sewage sludge. A final decision to regulate pollutants in the second round will significantly depend on the availability of sufficient information on a pollutant's toxicity and environmental fate, effect, and transport properties. As explained earlier, the process EPA will follow to identify these pollutants will be similar to the process used in developing the pollutants controlled in this rulemaking.

Description of the National Sewage Sludge Survey

The NSSS was a data collection effort relying on analytical sampling and an informational questionnaire to obtain data on sewage sludge quality and management. The NSSS was designed to collect information and data necessary to produce national estimates of: (1) Concentrations of toxic pollutants in municipal sewage sludge, (2) sewage sludge generation and treatment processes, (3) sewage sludge use and disposal practices and alternative use and disposal practices, and (4) sewage sludge treatment and disposal costs.

Participants in the NSSS were selected from 11,407 POTWs in the United States, Puerto Rico, and the District of Columbia, identified in the EPA 1986 Needs Survey as having at least secondary wastewater treatment. Secondary treatment was defined as a primary clarification process followed by biological treatment and secondary clarification. In identifying POTWs for the NSSS, EPA excluded POTWs with "Present Effluent Characteristics" codes of "No Discharge," "Raw Discharge," and "Advanced Primary" from the 1986 Needs Survey.

As noted above, the NSSS effort consisted of a questionnaire and analytical survey. The sample of POTWs for each component was selected from the 11,407 secondary treatment POTWs identified by the Agency. The POTWs included in the two samples were selected according to stratified probability design. The two POTW samples are related in that all POTWs in the analytical survey were selected from among those POTWs that were already selected to receive the questionnaire.

The questionnaire survey was designed to allow survey results to be analyzed separately by flow rate group and by sewage sludge use and disposal practice. The secondary treatment POTWs identified by the Agency were divided into 24 mutually exclusive groups. Membership in these groups is based on four categories of wastewater flow rate and six primary use and disposal practices. The flow rates and use and disposal categories are as follows:

1. POTW average daily flow rate categories:
   a. Flow less than or equal to one million gallons per day (MGD).
   b. Flow more than one MGD but less than or equal to 10 MGD.
   c. Flow more than 10 MGD but less than or equal to 100 MGD.
   d. Flow greater than 100 MGD.
2. POTW sewage sludge use and disposal practice groups:
   a. Land application.
   b. Distribution and marketing.
   c. Incineration.
   d. Monofill (sewage sludge only landfill).
   e. Ocean disposal.
   f. Co-disposal landfill and other.

A 50-page questionnaire was mailed to every POTW selected for the NSSS. A total of 479 POTWs were selected to receive the questionnaire. General information gathered by the questionnaire concerned service area, POTW operating information, general sewage sludge use and disposal practices, pretreatment activities, wastewater and sewage sludge testing frequencies, and POTW financial information. POTWs also supplied use and disposal practice specific information and indicated which practice(s) would be likely alternatives to current use and disposal practices.

POTWs in the analytical survey were restricted to the contiguous States and the District of Columbia. The POTWs in the analytical survey were drawn from those included in the questionnaire survey. A total of 208 POTWs from the four flow rate categories were selected for sampling and analysis. EPA contract personnel collected sewage sludge samples just prior to disposal from each POTW according to sampling and preservation protocols.

Samples were analyzed for a total of 412 analytes. These analytes included every organic, pesticide, dibenzofuran, dioxin and PCB for which EPA has gas chromatography and mass spectrometry (GC/MS) standards. The remaining pollutants are inorganics. The pollutants were also selected in consideration of: (1) The CWA section 307(a) priority pollutants, (2) toxic compounds highlighted in the Domestic Sewage Study, and (3) Resource Conservation and Recovery Act (RCRA, Pub. L. 94–580) appendix VIII pollutants.

Sewage sludge sampling, preservation, and analytical protocols were specifically developed for this survey. Analytical methods 1624 and 1625 were adapted from methods to deal specifically with the sludge matrix for volatile and semivolatile organics, respectively, and utilize gel permeation chromatography sample clean-up followed by isotope dilution gas chromatography-mass spectrometry analyte identification and quantification. Pesticides and PCBs, and dibenzofurans and dioxins were analyzed using analytical methods 1618 and 1613, respectively. Metals and other inorganics and classicals were analyzed by standard EPA methods. The analytical methods were either developed, chosen, or adapted specifically for the sludge matrix to give the most reliable, accurate, and precise measurements of the 412 analytes undertaken in any previous analytical survey.

All raw analytical results were subjected to a two-step quality assurance/quality control (QA/QC) procedure. In the first step, each result and analytical procedure was checked against analytical method specifications. If this step was satisfied, then the result was evaluated for potential outlier characteristics by checking on laboratory identification number validity as well as sample origin. If the sample raw data passed both of these checks, it was certified and reported to EPA. Information on the availability of the NSSS data base and analytical protocols is provided in Part XIV—Availability of Technical Information on the Final Rule.

Sewage Sludge Incinerator Field Studies

In 1987, the Agency initiated a series of field studies on sewage sludge incinerators to support the part 503 rulemaking effort. The purposes of the on-site tests were to obtain: (1) Information about the percentage of hexavalent chromium in the total chromium in the exit gas from a sewage sludge incinerator, (2) information on the percentage of nickel subsulfide in the total nickel in the exit gas from a sewage sludge incinerator, (3) total

hydrocarbon (THC) emissions data for the sewage sludge incinerators, and (4) information about organic compounds in the exit gas from a sewage sludge incinerator.

As part of the studies, information was collected at 10 sewage sludge incinerators. Eight of the incinerators were multiple hearth incinerators and one was a fluidized bed incinerator. The incinerators had various combinations of air pollution control devices including wet scrubbers and wet electrostatic precipitators.

For the final rule, risk-specific concentrations are used to develop allowable pollutant concentrations for metals in sewage sludge. The risk-specific concentration for chromium depends on the percentage of hexavalent chromium in the total chromium in the exit gas. Based on tests at several sewage sludge incinerators, the Agency determined that the conversion to hexavalent chromium varies with the type of sewage sludge incinerator and air pollution controls. From the results, EPA derived different risk-specific concentration values (shown in Table 2 of section 503.43 of today's final part 503 regulation) based on four combinations of sewage sludge incinerators and air pollution control technologies.

The results of the nickel speciation tests revealed that nickel subsulfide is not emitted from sewage sludge incinerators above the level of detection for the analytical methods used in the tests. In order to be protective, EPA decided to base the standard risk-specific concentration for nickel on the higher of two detection limit values for nickel subsulfide. The risk-specific concentration for nickel in Table 1 of section 503.43 of today's final part 503 regulation is based on there being 10 percent nickel subsulfide in total nickel emitted from a sewage sludge incinerator.

Data from the studies on the total hydrocarbon concentration in the exit gas from sewage sludge incinerators were used, along with the aggregate risk analysis, as the basis for the THC operational standard in today's final part 503 regulation. This standard is technology-based in that it is based on performance data from sewage sludge incinerators. The THC operational standard is partly based on THC emissions measured using a heated sampling line and corrected to seven percent oxygen and zero percent moisture.

Information on total organic pollutants and THC in the exit gas from the sewage sludge incinerator was the basis for THC being used as a surrogate for measuring organic compounds in the exit gas. These tests showed that there is a significant correlation between THC and organic compounds, which is important because sampling and analysis techniques are not available to identify or quantify all potential organic compounds emitted from sewage sludge incinerators, nor are toxicity data available for all compounds. In addition, THC is easier and less expensive to monitor than are total organics, and THC can be measured on a continuous basis, which enhances operating and management practices.

Further, information on the organic pollutants in the exit gas from the sewage sludge incinerator was used to judge whether the technology-based THC limit protects public health and the environment from the reasonably anticipated adverse effects of organic pollutants in sewage sludge. Knowing which organic pollutants are in the exit gas (or potentially in the exit gas) allowed the Agency to develop an ambient risk-specific concentration for the organic compounds. This value was then used to estimate the risk level for the technology-based THC limits, which is an exit gas concentration.

The sewage sludge incinerator tests were also used to demonstrate that (1) wet electrostatic precipitators were effective at controlling metals emissions, (2) improved incinerator operating procedures and afterburners were effective at controlling THC emissions, and (3) THC analyzers were reliable instruments for measuring THC in the exit gas. More details on the sewage sludge incinerator field studies may be found in the Technical Support Document for Incineration. Information on the availability of single copies of this and other technical support documents is provided in part XIV.

Domestic Septage Study

In 1991, EPA initiated a sampling and analysis study for domestic septage. The purpose of this study was to characterize domestic septage. It was conducted because data on organic pollutants in domestic septage were not available.

As part of the study, nine samples of domestic septage were collected and analyzed for over 400 pollutants. These samples were collected and preserved in accordance with approved protocols.

Analytical results from this study were used for two purposes. First, the total Kjeldahl nitrogen and ammonia concentrations in the domestic septage were used to calculate the factor in the annual application rate equation for domestic septage in the final part 503 regulation. Second, the data were used in the justification of the domestic septage annual application rate.

More details on the domestic septage study and how it was used in developing the final regulation may be found in the Technical Support Document for Land Application. Information on the availability of single copies of this and other technical support documents is provided in Part XIV—Availability of Technical Information on the Final Rule.

Part VI: Risk Assessment Methodology

The purpose of risk assessment for EPA is to identify the potential for adverse effects associated with a pollutant in order to determine what, if any, measures are needed to protect public health and the environment. EPA, in developing these use and disposal standards, evaluated the potential risk to public health or the environment from individual pollutants present in sewage sludge. In performing this assessment, EPA relied on its traditional risk assessment processes and tools.

The methods for performing a risk assessment used by EPA were originally outlined by the National Academy of Sciences (NAS, 1983—Risk Assessment and Management: Framework for Decision Making. Washington, DC) and published in the **Federal Register.** EPA followed the following guidelines in its work in developing these regulations: U.S. EPA, 1986a—Guidelines for Carcinogen Assessment; Guidelines for Estimating Exposure; Guidelines for Mutagenicity Risk Assessment; Guidelines for Health Assessment of Suspect Developmental Toxicants; and Guidelines for Health Risk Assessment of Chemical Mixtures. FR Vol. 51, No. 185.

EPA's methodology for risk assessment may be broken down into four stages: hazard identification, dose-response evaluation, exposure evaluation, and characterization of risks. These are explained below.

Hazard Identification

The first element in this process is hazard identification—a determination of the nature of the effects that may be experienced by an exposed human or ecosystem from an identified pollutant. Hazard identification is used to determine whether the pollutant poses a hazard and whether sufficient information exists to perform a quantitative risk assessment. Hazard identification consists of gathering and evaluating all relevant data that help determine whether a pollutant poses a specific hazard, then qualitatively evaluating those data on the basis of the

type of health effect produced, the conditions of exposure, and the metabolic processes that govern pollutant behavior within the body or organism. It may also involve characterization of the behavior of a pollutant in the environment (or within an organism) as well as interactions the pollutant may undergo within the environment or within an organism. Thus, hazard identification helps to determine whether it is appropriate scientifically to infer that effects observed under one set of conditions (e.g., in experimental animals) are likely to occur in other settings (e.g., in human beings), and whether data are adequate to support a quantitative risk assessment.

The first step in hazard identification is to gather information on the toxic properties of pollutants through animal studies and controlled epidemiological investigations of exposed human populations.

The use of animal toxicity studies is based on the longstanding assumption that effects in human beings can be inferred from effects in animals. Three categories of animal bioassay are: Acute exposure tests, subchronic tests, and chronic tests. The usual starting point for such investigations is the study of acute toxicity in experimental animals. Acute exposure tests expose animals to high doses for short periods of time, usually 24 hours or less. The most common measure of acute toxicity is the median lethal dose (LD_{50}), defined as the dose level that is lethal to 50 percent of the test animals. This dose is usually experimentally determined by administering the test compound orally or intraperitoneally to mice or rats. Less commonly, tests can also be conducted by administering the pollutant by inhalation, dermal exposure or intravenously. LD_{50} is also used for aquatic toxicity tests and refers to the concentration of the test substance in the water that results in 50 percent mortality in the test species. Substances exhibiting a low LD_{50} (e.g., for sodium cyanide, 6.4 mg/kg) are more acutely toxic than those with higher values (e.g., for sodium chloride, 3,000 mg/kg) (NIOSH, 1979—Registry of Toxics Effects of Chemical Substances).

Subchronic tests for pollutants involve repeated exposures of test animals for 5 to 90 days, depending on the animal, by exposure routes corresponding to human exposures. The tests are used to determine the No Observed Adverse Effect Level (NOAEL), the Lowest Observed Adverse Effect Level (LOAEL), and the Maximum Tolerated Dose (MTD). The MTD is the largest dose a test animal can receive for most of its lifetime without demonstrating adverse effects other than cancer. In studies of chronic effects of pollutants, test animals receive daily doses of the test agent for approximately 2 to 3 years. The doses are lower than those used in acute and subchronic studies and the number of animals is larger because these tests are trying to detect effects that will be observed in only a small percentage of animals.

The second method of evaluating health effects uses epidemiology—the study of patterns of disease in human populations and the factors that influence these patterns. In general, scientists view well-conducted epidemiological studies as the most valuable information from which to draw inferences about human health risks. Unlike the other approaches used to evaluate health effects, epidemiological methods evaluate the direct effects of hazardous substances on human beings. These studies also help identify human health hazards without requiring prior knowledge of what causes disease, and they complement the information gained from animal studies.

Epidemiological studies compare the health status of a group of persons who have been exposed to a suspected causal agent with that of a comparable nonexposed group. Most epidemiological studies are either case-control studies or cohort studies. In case-control studies, a group of individuals with a specific disease is identified (cases) and compared with individuals not having the disease (controls) in an attempt to find past commonalities in exposures. Cohort studies start with a group of people (a cohort) considered free of the specific disease. The health status of the cohort known to have a common exposure is examined over time to determine whether any specific condition or cause of death occurs more frequently than might be expected from other causes.

Epidemiological studies are well suited to situations in which exposure to the risk agent is relatively high; the adverse health effects are unusual (e.g., rare forms of cancer); the symptoms of exposure are known; the exposed population is clearly defined; the link between the causal risk agent and adverse effects in the affected population is direct and clear; the risk agent is present in the bodies of the affected population; and high levels of the risk agent are present in the environment.

The next step in hazard identification is to combine the pertinent data to ascertain the degree of hazard associated with each pollutant. In general, EPA uses different approaches for qualitatively assessing the risk or hazard associated with carcinogenic versus noncarcinogenic effects. For noncarcinogenic health effects (e.g., mutagenic effects, systemic toxicity), the Agency's hazard identification/weight-of-evidence determination has not been formalized and is based on qualitative assessment.

EPA's guidelines for carcinogenic risk assessment (U.S. EPA, 1986a) group all human and animal data reviewed into the following categories based on degree of evidence of carcinogenicity:

- Sufficient evidence.
- Limited evidence (e.g., in animals, an increased incidence of benign tumors only).
- Inadequate evidence.
- No data available.
- No evidence of carcinogenicity.

Human and animal evidence of carcinogenicity in these categories is combined into the following weight-of-evidence classification scheme:

- Group A—Human carcinogen
- Group B—Probable human carcinogen
  B1—Higher degree of evidence
  B2—Lower degree of evidence
- Group C—Possible human carcinogen
- Group D—Not classifiable as to human carcinogenicity
- Group E—Evidence of noncarcinogenicity

Group B, probable human carcinogen, is usually divided into two subgroups: B1—pollutants for which some limited evidence of carcinogenicity from epidemiology studies exists, and B2—pollutants for which sufficient evidence exists from animal studies but inadequate evidence exists from epidemiology studies. EPA treats pollutants classified in categories A and B as suitable for quantitative risk assessment. Pollutants classified as Category C receive varying treatment with respect to dose-response assessment (see discussion below), and they are determined on a case-by-case basis. Pollutants in Groups D and E do not have sufficient evidence to support a quantitative dose-response assessment.

The following factors are evaluated by judging the relevance of the data for a particular pollutant:

- Quality of data.
- Resolving power of the studies (significance of the studies as a function of the number of animals or subjects).
- Relevance of route and timing of exposure.
- Appropriateness of dose selection.
- Replication of effects.
- Number of species examined.

• Availability of human epidemiologic study data.

Although the information gathered during the course of identifying each pollutant hazard is not used to estimate risk quantitatively, hazard identification enables researchers to characterize the body of scientific data in such a way that two questions can be answered: (1) Is a pollutant a hazard? and (2) is a quantitative assessment appropriate? The following two sections discuss how such quantitative assessments are conducted.

Dose-Response Evaluation

Estimating or evaluating the dose-response relationships—what "dose" of a chemical produces a given "response"—for the pollutant under review is the second step in the risk assessment methodology. Evaluating dose-response data involves quantitatively characterizing the connection between exposure to a pollutant (measured in terms of quantity and duration) and the extent of toxic injury or disease. Most dose-response relationships are estimated based on animal studies, because even good epidemiological studies rarely have reliable information on exposure. Therefore, this discussion focuses primarily on dose-response evaluations based on animal data.

Two general approaches to dose-response evaluation are used, depending on whether the health effects are based on threshold or nonthreshold characteristics of the pollutant. In this context, "threshold" refer to exposure levels below which no adverse health effects are assumed to occur. For effects that involve altering genetic material (including carcinogenicity and mutagenicity), the Agency's position is that effects may take place at very low doses; therefore, they are modeled with no thresholds. For most other biological effects, it is usually, but not always, assumed that threshold levels exist.

For nonthreshold effects, the key assumption is that the dose-response curve for such pollutant exhibiting these effects in the human population achieves zero risk only at zero dose. A mathematical model is used to extrapolate response data from doses in the observed (experimental) range to response estimates in the low-dose ranges. Scientists have developed several mathematical models to estimate low-dose risks from high-dose experimental risks. Each model is based on general theories of carcinogenesis rather than on data for specific pollutants. The choice of extrapolation model can have a significant impact on the dose-response estimate. For this reason, the Agency's cancer assessment guidelines recommend the use of the multistage model, which yields estimates of risk that are conservative, representing a plausible upper limit of risk. With this approach, the estimate of risk is not likely to be lower than the true risk (U.S. EPA, 1986a).

The potency value, referred to by the Carcinogenic Assessment Group as Q_1^* (also referred to as Q^*), is the quantitative expression derived from the linearized multistage model that gives a plausible upper-bound estimate to the slope of the dose-response curve in the low-dose range. The Q_1^* is expressed in terms of risk-per-dose and has units of $(mg/kg/day)^{-1}$. These values should be used only in dose ranges for which the statistical dose-response extrapolation is appropriate. EPA's Q_1^* values can be found in the Integrated Risk Information System (IRIS), accessible through the National Library of Medicine. IRIS is EPA's computerized data base on health effects for carcinogenic and non-carcinogenic pollutants and contains the Agency's Q_1^* and RfD values for these pollutants.

Systemic toxicants or other compounds exhibiting noncarcinogenic and nonmutagenic health effects are assumed to exhibit threshold effects. Dose-response evaluations for substances exhibiting threshold responses involve calculating what is known as the Reference Dose (oral exposure) or Reference Concentration (inhalation exposure), abbreviated to RfD and RfC, respectively. RfDs and RfCs are estimates of a daily exposure to the human population that is likely to be without appreciable risk of deleterious effects during a lifetime. The RfDs and RfCs developed by EPA can be found in IRIS.

No Observed Effect Level (NOEL), No Observed Adverse Effect Level (NOAEL), Lowest Observed Effect Level (LOEL), or Lowest Observed Adverse Effect Level (LOAEL) can be used to calculate RfDs and RfCs values. Each value is stated in mg/kg/day, and all the values are derived from laboratory animal and human epidemiology data. Uncertainty factors are applied to RfD and RfC values depending on the level of confidence the Agency has in the data used to derive them. The magnitude of uncertainty factors varies according to the nature and quality of the data from which the NOAEL or LOAEL is derived. The uncertainty factors range from 10 to 10,000. They are used to extrapolate from acute to chronic effects, to account for differences in species sensitivity or variation in sensitivity in human populations and, when appropriate, to extrapolate from a LOAEL to a NOAEL. Ideally, route-specific (e.g., exposure through dermal contact, inhalation, etc.) RfDs and RfCs should be developed. If information is available for only one route of exposure, this information is used to extrapolate to other routes. Once an RfD or RfC is derived, the next step in the risk assessment is to estimate actual human (or animal) exposure.

Exposure Evaluation

The first step in exposure evaluation is to estimate environmental concentrations of pollutants. The Agency relies on two methods to determine pollutant concentration:

(1) Directly monitoring levels of pollutants, and

(2) Using mathematical models to predict pollutant concentrations.

Once environmental pollutant concentrations are determined, the Agency must then determine the severity of the exposure. In this step, the Agency evaluates data on the nature and size of the population exposed to a pollutant, the route of exposure (i.e., oral, inhalation, dermal), the extent of exposure (concentration times time), and the circumstances of exposure.

Monitoring

Monitoring involves collecting and analyzing environmental samples. These data provide the most accurate information about pollutant concentrations. The two kinds of exposure monitoring are personal monitoring and ambient (or site and location) monitoring.

Most exposure assessments are complicated in that people move from place to place and are therefore exposed to different pollutants throughout the day. Some exposure assessments attempt to compensate for this variability by personal monitoring. Personal monitoring uses one or more techniques to measure the actual concentrations of hazardous substances to which individuals are exposed. One technique is sampling air and water. The amount of time spent in various microenvironments (i.e., home, car, or office), may be combined with data on environmental concentrations of risk agents in those mircroenvironments to estimate exposure.

Personal monitoring may also include the sampling of human body fluids (e.g., blood, urine, or semen). This type of monitoring is often referred to as biological monitoring or biomonitoring. Biological markers (also called biomarkers) can be classified as markers of exposure, of effect, and of susceptibility. Biological markers of exposure measure exposure either to the exogenous material, its metabolite(s), or

to the interaction of the xenobiotic agent with the target cell within an organism. An example of a biomarker of exposure is lead concentration in blood. In contrast, biologic markers of effect measure some biochemical, physiologic, or other alteration within the organism that points to impaired health. (Sometimes the term biomonitoring is also used to refer to the regular sampling of animals, plants, or microorganisms in an ecosystem to determine the presence and accumulation of pollutants, as well as their effects on ecosystem components.)

Ambient monitoring (or site or location monitoring) involves collecting samples from the air, water, soil, or sediments at fixed locations, then analyzing the samples to determine environmental concentrations of hazardous substances at the locations. Exposures can be further evaluated by modeling the fate and transport of the pollutants.

Modeling

Measurements are a direct and preferred source of information for exposure analysis. However, such measurements are expensive and are often limited geographically. The best use of such data is to calibrate mathematical models that simulate the movement of pollutants into and through the environment with mathematical equations or algorithms that can be more widely applied. Estimating concentrations using mathematical models must account not only for physical and chemical properties related to fate and transport, but must also document mathematical properties (e.g., analytical integration vs. statistical approach), spatial properties (e.g., one, two, or three dimensions), and time properties (steady-state vs. nonsteady-state).

Hundreds of models for fate, transport, and dispersion from the source are available for all media. Models can be divided into five general types by media: atmospheric models, surface-water models, ground water and unsaturated-zone models, multimedia models, and food-chain models. These five types of models are primarily applicable to pollutants or to radioactive materials associated with dusts and other particles.

Selecting a model for a given situation depends on the following criteria: Capability of the model to account for important transport, transformation, and transfer mechanisms; fit of the model to site-specific and substance-specific parameters; data requirements of the model, compared to availability and reliability of off-site information; and the form and content of the model output that allow it to address important questions regarding human exposures.

To the extent possible, selection of the appropriate fate and transport model should follow guidelines specified for particular media where available; for example, the Guidelines on Air Quality Models (U.S. EPA, 1986b—Guidelines on Air Quality Models (Revised), EPA/OAQPS–450/2–78–027R.).

Population Analysis

Population analysis involves describing the size and characteristics (e.g., age/sex distribution), location (e.g., workplace), and habits (e.g., food consumption) of potentially exposed human and nonhuman populations. Census and other survey data often are useful in identifying and describing populations exposed to a pollutant.

Integrated exposure analysis involves calculating exposure levels, along with describing the exposed populations. An integrated exposure analysis quantifies the contact of an exposed population to each pollutant under investigation via all routes of exposure and all pathways from the sources to the exposed individuals. Finally, uncertainty should be described and quantified to the extent possible.

Risk Characterization

It is EPA policy to describe statements about risks in major regulatory and policy documents to convey the extent of the Agency's confidence in those risk estimates. Risk assessment information must be clearly presented, separate from any risk management considerations. EPA seeks to present information on the range of exposures and risks and to identify all major uncertainties and address their influence on the assessment.

One way to identify uncertainties in risks is to evaluate how exposure assessments were conducted. For example, in human health risk assessment for this rule, the technical support documents define several exposure pathways for the three sludge management practices. EPA used point estimates for each exposure pathway and did not consider variability of the parameters describing exposure among individuals.

EPA's confidence in the risk assessment is necessarily limited by the data available to the EPA and by the lack of accepted risk assessment methodologies in certain areas. Overall, it is difficult to judge whether the point estimates in the human health risk assessment and assumptions made in the ecological effects assessment are likely to underestimate or overestimate actual risks. Some aspects of the risk analysis may contain conservative or protective assumptions, while other factors may bias results in the opposite direction. In addition, some assumptions are based on longstanding Agency policy and reflect risk management choices. Again, some of these assumptions are conservative while others are less conservative.

The sections that follow examine the uncertainties in several important aspects of the risk assessment: human health, human exposure pathway, plant toxicity and uptake, effects on wildlife, and ground water impacts.

Human Health Assessment

In accordance with standard Agency practice, human-health dose-response assessments are based on reference doses (RfDs) for non-carcinogens and cancer potency factors (Q_1^*) for carcinogens. Both of these measures are generally considered conservative, that is, they predict a greater impact on human health than is likely to actually occur. The reference dose is defined as "an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily exposure to the human population (including sensitive subgroups) that is likely to be without appreciable risk of deleterious effects during a lifetime". It is calculated by taking the most sensitive adverse effect found in toxicological testing and applying a series of uncertainty factors, so that higher exposures may also not present any appreciable risk. It is assumed, for example, that humans may be an order of magnitude more sensitive than the animals tested, but in fact humans may also be less sensitive. It is also assumed, except as noted, in the risk assessments relied on for these regulations that exposures may last an entire lifetime, whereas they may in fact be much shorter.

Similarly, calculated cancer risks are described in the Agency's risk assessment guidelines as "plausible upper bounds" to the actual risk. Conservative assumptions are used in the calculations, such as use of the most sensitive animal data in bioassays, linear extrapolation to low doses, species-to-species conversion based on surface area, and use of an upper confidence limit for the dose-response slope. Thus, it is unlikely that the cancer risk would be greater than is calculated, but it could be orders of magnitude less or even zero.

Human Exposure Assessment

There are uncertainties concerning the long-term behavior of metals in sludge. The sludge experts that EPA

relied on conclude, based on field studies, that iron oxides and manganese oxides found in sludge as a result of wastewater treatment and metal oxides naturally found in soils may form complexes with the metals and significantly reduce their bioavailability. Documentation to support these conclusions is limited. At a minimum, when the organic component of the sludge breaks down, it is possible that average concentrations of pollutants may increase or they may become more bioavailable.

The risk assessment for the soil ingestion pathway assumes the child ingests 0.2 grams of undiluted sludge every day for a five-year period, and has a "typical" background intake of the contaminants. The Agency has determined that this assumption is conservative and will protect children who inadvertently ingest sewage sludge.

The exposure assessment for many pathways assumes that the sludge will be fully incorporated into the top six inches of soil, although there is no labeling requirement to provide these instructions on sludge products.

Home Garden Scenario

The Agency characterized the data and assumptions used for exposure analysis in the human food chain pathway; specifically the calculations for production of crops for home consumption by gardeners and farmers. The population assessed for this pathway were individuals who use sludge products to produce crops for their own consumption. Ideally, the Agency would like to describe the distribution of exposures within this population. However, the available data are insufficient for such an analysis. The Agency made specific assumptions about a number of variables addressing human behavior and properties of sludge.

Plant Uptake of Metals

The slope of the line for the plant uptake was used to estimate metal concentration in plants. Plant uptake of metals was considered proportional to the cumulative application rates. An uncertainty exists whether it is appropriate to calculate plant concentration as a slope of plant uptake times an application rate. Some data on plant concentration versus application rate suggest non-linearities. EPA's assessment assumes that the linear approximation is conservative because application rates allowed under the rule are in general well in excess of test plot application rates, and metals concentration in plants is thought to reach a plateau at higher sludge application rates.

Another uncertainty in the plant uptake calculation is the use of a geometric mean value of all slopes calculated from individual sludge studies. If a distribution is lognormal, the geometric mean provides an estimate of the median (50th percentile) slope. Such a value is useful in estimating uptake for a "typical sludge". The individual sludge studies that EPA used to calculate plant uptake used sludges with higher metals concentrations than the "typical sludges" on the market today. Sludges with higher metals concentration are most likely to produce higher plant concentrations. It is possible that the geometric mean value of uptake slopes that EPA used is higher than the mean value would be if the studies used in calculations were repeated using currently produced sludge.

Another uncertainty exists as a result of the way that the geometric mean calculations were done. A value of 0.001 was used as the uptake slope from individual studies when there was no significant increase in metal uptake by the crops raised on the sludge. A geometric mean calculation is very sensitive to the inclusion of low values. From the inspection of several data sets it appears that 0.001 is substantially smaller than the upper bound on uptake that would be obtained from "no significant increase in metal uptake" studies. The use of the default slope of 0.001 may underestimate the typical slope for crop uptake.

Dietary Consumption

The pollutant limits were calculated based on population average food consumption estimates derived in a study by Pennington. These estimates are based on United States government survey data from short term food consumption reports of large surveyed populations. Such survey data is an accepted basis to estimate population average food consumption rates.

Two limitations exist with the way that the food consumption estimates were presented. First, the calculations presented address the average g/day food consumption rate. In the sludge dietary exposure assessment food consumption values are normalized for adult body weight. This does not reflect the higher food consumption rates per unit body weight of young children compared with adults. The dietary assessment does not separately consider exposures to children as a population subgroup.

A second limitation of the food consumption estimates is that they apply to the United States general population rather than individuals raising crops for home consumption. It is possible that individuals who raise a particular crop may have a higher consumption rate than individuals who only obtain the item from commercial sources. This would introduce an underestimation of the consumption rates in the population considered in the assessment. On the other hand, home gardens do not produce year-round, which may offset this bias.

Fraction of Food Raised on Sludge Treated Land.

To complete the analysis of the human food chain pathway it is necessary to estimate how much food comes from sludge treated land. USDA survey data on average percentage food consumption from home grown crops was used. While these estimates are average values for this population, EPA estimated that large garden plots are required to produce the amount of home grown crops assumed in the assessment. EPA believes that a relatively small percentage of gardens are that large. Secondly, because of seasonal factors, it may be difficult for most gardeners to produce the quantities of leafy vegetables that are assumed in the assessment. Leafy vegetables are important to the assessment as these crops tend to have high metal uptake slopes.

Plant Toxicity and Uptake

The phytotoxicity assessment was based on the relationships between sludge application rate and tissue residue, between tissue residues and reduction in growth, and between reduction in growth and reduction in yield. The relationship between reduction in growth and reduction in yield is particularly uncertain. The uncertainties will vary with chemical, crop species, and toxic endpoint; the best data were available for zinc, corn, and growth reduction. Some crops (e.g., beans) and endpoints (e.g., reproduction) may be more sensitive to the effects of sludge, although other crops (e.g. sudangrass) and endpoints (e.g., mortality) may be less sensitive. In addition, there are limited data about non-cultivated forest species and perennials, which may differ in their response to contaminants.

Phytotoxicity of metals is particularly sensitive to soil pH and the degree of binding to the sludge matrix. Most metals are more bioavailable in acidic soil, but molybdenum and selenium may be more available in alkaline soils. Since forest soils in some areas of the country may have pH below 5.5, the

assumption that the analysis represents a "reasonably worst case" may not apply to all forest land application.

While some data shows that cadmium uptake plateaus at a certain concentration in the soil, other evidence indicates copper and zinc may continue to increase. In addition, uptake varies among plant species; e.g. beets take up copper more readily than 38 other crops studied.

However, based upon results from several field studies, EPA believes that metals are bound to the sludge matrix and remain relatively unavailable biologically.

Wildlife

EPA has no standard methodology for assessing risks to wildlife. There are many uncertainties about how sludge application affects terrestrial wildlife and soil biota. The analysis presented, while utilizing available data and methodologies, only described direct toxicity to a few species. Uncertainties exist about how to extrapolate this information to other birds, mammals, amphibians, and soil invertebrates whose relative sensitivity to the compounds of concern is unknown. The ecotoxicological analyses focused on cadmium and lead because the most data are available for them. Other chemicals, particularly selenium, may also be of concern.

The criteria are based on direct toxicity, and impacts at population and community levels are not addressed. In addition, EPA used a simple linear model of bioaccumulation or bioconcentration from soil to earthworms to shrews and did not model the more complex effects of sludge contaminants on the terrestrial food chain. The analysis evaluates effects on shrews as an indicator of ecotoxicological effects, but there may be other highly exposed or sensitive organisms in the forest or field systems. Other uncertainties arise from the assumption that 33% of the shrew's diet consists of contaminated soil biota (represented solely by earthworms).

Because no standard methodologies exist, EPA did not consider how sludge amendment of forest soils or edges of agricultural fields may change the composition of species in the plant community, through either nutrient enhancement or phytotoxicity. Such changes, in turn, could change the species of herbivorous and granivorous insects, mammals, and birds with subsequent ramifications throughout the food web.

Uncertainty also exists about the impact of sludge on soil biota. The criteria are based solely on a NOAEL for the earthworm *Eisenia foetida*, which may not be the most sensitive or appropriate species to evaluate for many of the chemicals. Additionally, the analysis did not address the influence on the soil flora and fauna (nematodes, protozoa, bacteria, fungi, viruses) of adding nutrients to the soil or possible increased exposure to organisms that feed in the litter layer due to the organic matter in the sludge.

Aggregate Risk

The statistical approximations and assumptions used in the aggregate risk analysis are extensive and several are important contributors to uncertainty. While the model used for assessment of national aggregate risk has not been validated in comparison to actual exposure data, the Agency's aggregate risk assessment models generally reflect assumptions similar to those described here.

(1) The assessment assumes that population exposure is lognormally distributed before and after exposure to sludge. As the assessment addresses many low probability events in the far tail of the population distribution, a strict lognormal model may not be appropriate but no other data were available.

(2) The effect of sludge use on the distribution is assessed by making a small shift to the geometric mean of the United States population distribution without changing the geometric standard deviation. In principle, both the geometric mean and standard deviation may be expected to change. The geometric standard deviation is a highly sensitive parameter in lognormal models, so this assumption may be important in aggregate risk calculations.

(3) For lack of adequate data, the inherent variability in individual exposure to pollutants in sludge is not addressed.

Ground Water

Sensitivity analysis for the ground water model indicates that numerical criteria are very sensitive to values selected for equilibrium partition coefficients for each pollutant, and the range of plausible values for these coefficients spans several orders of magnitude. However, the Agency believes that it has chosen reasonable assumptions for the modeling, resulting in numerical criteria that are sufficiently protective of public health.

An additional source of uncertainty for partition coefficients is the speciation of metals within soils. For its calculations, the Agency used single lumped partition coefficients to represent the behavior of potential mixes of metal species within the soil. These coefficients are based on studies of sandy loam soils treated with wastewater sludge and are believed to provide appropriate and protective values for the calculations. However, under certain local conditions (e.g., highly acidic soils), differences in the speciation of metals could lead to partitioning that differs by one or more orders of magnitude from that predicted by the ground water model. They could also affect the toxicity of metals in groundwater.

EPA assumed that sludge would be uniformly mixed to a depth of 15 cm. Uneven distribution of contaminants in soil could lead to "hot spots" and variation in the amount of leaching to ground water. However, because the criteria are based on exposure averaged over many years of an individual's lifetime, the Agency believes that this variation will not significantly affect total exposure.

Monitoring Study to Address Land Application Risk Assessment Issues for Round Two Standards

Section 405 requires EPA to develop standards for sludge use or disposal which are adequate to protect public health and the environment from reasonably anticipated adverse effects of pollutants in sludge, present in concentrations that may adversely affect public health and the environment. The statute directs the Agency to promulgate these standards in two stages and to revise the standards periodically. The Agency has concluded that the standards adopted today are adequately protective based on its assessment of the available data. However, to verify its conclusions about the adequacy of today's standards, the Agency is committing to develop a comprehensive environmental evaluation and monitoring study. The results of the study will provide a useful data base for the Round Two sludge standards. Such a study will also aid the Agency in its efforts to develop a comprehensive ecological risk assessment methodology, and to correct any uncertainties in subsequent part 503 rulemakings.

As a minimum this study will address:

(1) Transport and transformation of inorganic and organic constituents of sludge considering leaching, surface runoff, and soil and sludge binding capacity (the variability in the binding capacity of different sludge/soil matrices will be considered). Ground water monitoring will be included in the study to assess whether leaching of inorganics is occurring;

(2) Variability of real-world sludge application practices;

(3) Bioavailability of sludge constituents to both plants and animals under different environmental conditions;

(4) Ecological effects of organic and inorganic constituents as well as pathogens, including effects to wildlife and non-cultivated crops and impacts on unmanaged plant and animal communities, endpoints chosen in the risk assessment for phytotoxicity and alternative endpoints;

(5) Confirmation of the distribution and variability in the concentration of constituents and binding capacity of sludge matrices; and

(6) Long-term temporal changes; for example, changes in binding capacity as sludge ages and sensitivity of the results to changes in site condition such as degradation of the sludge matrix, pH changes, and land-use changes.

EPA will develop a plan for the study and submit it to external experts for comment and refinement. The final plan including study design will be available for public comment at the time that the Round Two regulation is proposed. The Agency is seeking comment at this time on the priority of the various elements of the study and suggestions for alternative cost-effective approaches to address the uncertainties in the human health and ecological risk assessment. This information will be used in development of the study design.

As the Agency develops its ecological risk assessment methodology and as it obtains results from the monitoring study, the risk assessment decisions made in this final rule may need revision. The Agency will consider necessary revisions when the results of the monitoring study are available.

The Agency will also further evaluate the potential risks and benefits of nutrients contained in sludge in the Round Two sludge regulations. Although sludge, like other fertilizers applied to agricultural land, provides valuable nutrients needed for crop growth, over application can degrade ground and surface water quality. An extensive evaluation of the effects from nutrients in sludge was not performed in Round One. Because sewage sludge has relatively low nutrient content as compared to other unregulated commercial fertilizers, EPA did not consider nutrients a problem if sewage sludge is applied at agronomic rates.

Excessive loadings of nutrients from the use of fertilizers, both organic and inorganic, pose significant ecological risks by stimulating the over-enrichment of estuaries, lakes, reservoirs, bays, and slower streams in a process known as eutrophication. Eutrophication occurs when excess nutrients stimulate the growth of algae and alter the biological composition of ecological communities. In general, nitrogen is the limiting factor for plant growth in marine ecosystems and phosphorus is the limiting factor in fresh water. In some estuarine systems, both nitrogen and phosphorus can limit plant growth.

Nitrogen in the form of nitrate is highly mobile and moves with water. If nitrate finds its way to ground water and then to drinking water wells, it may pose a human health risk. EPA has set a drinking water standard of 10 mg/l to protect against the most sensitive health effect endpoint, methemoglobinemia (blue baby syndrome) in infants.

The Agency will consider sludge management practices in the context of risks and benefits posed by nutrients in the Round Two regulations. In addition, representatives of the U.S. Department of Agriculture have raised concerns about the standard for cadmium contained in these regulations. EPA believes, based on its current analyses, that the regulations promulgated today satisfy the requirements of Section 405 of the Clean Water Act. However, EPA welcomes additional data and analyses related to this particular sludge standard and will consider any such additional information received by the Agency within 90 days from the publication of today's rule. Should significant additional data or analyses be presented to the Agency demonstrating that a different standard is warranted, the Agency will expeditiously modify this rule.

Part VII: Risk Management Approach

Agency Risk Management Approach

Armed with the risk characterization information, the Agency can determine if a "significant" or "unreasonable" risk exists, what to do about it or what controls are necessary, and how to communicate the risk to the public and regulated community. Implicit in this analysis is that the simple identification of risk is not necessarily sufficient to justify action. In addition, non-risk factors such as the availability and effectiveness of controls, the existence of alternatives, and any benefits that would be lost or gained as a result of controls must be considered by the Agency in the process of reaching a decision. In some cases, the weight of the risk and benefits will be such that the benefits outweigh the risks. In such a case, the Agency's risk management decision may be to take no regulatory action. In other cases, risks relative to benefits are such that the reasonable action is to reduce the risk or control the environmental effect.

This process is interactive and affects earlier components in the risk assessment. Under each exposure scenario, the Agency identifies a range of control strategies and regulatory requirements that usually reduce exposure so that the risk or identified effect is put back into balance with the benefits. Using the information provided in the risk management step, the Agency can select the appropriate control strategy and means for communicating it to the public and regulated community.

Alternative Regulatory Approaches Considered in Developing the Final Rule

Introduction

This part of the preamble discusses alternatives the Agency considered in developing today's part 503 rule. EPA solicited public comments on these proposed approaches and sought suggestions for other appropriate approaches that the Agency could consider in developing its risk assessment methodology used to establish standards for the use and disposal of sewage sludge. Over the years, EPA has developed different regulatory approaches, depending on the legal requirements of a particular statute, surrounding issues, uncertainties, and information bases. Other EPA statutes covering the same pollutants or activities have very different legal requirements from section 405(d) of the CWA. The following discussion examines how different statutes mandate how EPA establishes standards under different regulatory regimes.

Title III of the 1990 Clean Air Act Amendments establishes a program to reduce emissions of hazardous air pollutants from stationary sources. Title III requires EPA to develop standards for sources of hazardous air emissions based on maximum achievable control technology for controlling these emissions. Section 112 includes a list of nearly 200 chemicals and chemical classes for which National Emission Standards for Hazardous Air Pollutants may be set. The standards promulgated under section 112 require the maximum achievable reduction in emissions, considering cost and other relevant factors. Categories and subcategories of sources are subject to regulation according to a specified schedule, with the first set of sources regulated by 1992.

EPA proposed listing sewage sludge incinerators as a category of major

sources as required under title III of the 1990 Clean Air Act Amendments (54 FR 28548, June 21, 1991). At this time, the Administrator has decided that listing this category of sources under the Clean Air Act is required by the legislation. Regulatory review of this category will take into account the final requirements being promulgated today under part 503. The regulatory review of this category is not expected to take place for seven years because comprehensive controls on this category are in the incineration subpart of the part 503 rule being promulgated today.

The EPA may promulgate additional standards, if needed, to protect health with an ample margin of safety or to prevent adverse environmental effects. Unless new legislation is enacted, health-based standards will be mandatory for categories of sources that pose an estimated cancer risk of greater than 1×10^{-6} to the most exposed individual. The schedule for these "residual risk" standards is nine years after promulgation of control technology standards for the first set of source categories and eight years post-promulgation for the remaining source categories.

Under the Safe Drinking Water Act (SDWA), the Agency first defines a goal to limit the concentration of the pollutant in drinking water (maximum contaminant level, goal—MCLG; for carcinogens, the concentration goal is zero). After setting a goal, the Agency sets an enforceable standard (maximum contaminant level) based on feasibility. Under the SDWA, the enforceable standard may not necessarily achieve the goal set for the pollutant, but it is established at a level that is safe for human health. The carcinogenic risk levels for drinking water MCLs generally range from 1×10^{-6} to 1×10^{-4}

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA) explicitly provide for balancing health and costs in decisionmaking. The carcinogenic risk levels established under FIFRA range from 1×10^{-6} to 1×10^{-4}, depending on the type of exposure involved. Applier exposure is generally in the range of 1×10^{-4} and dietary exposure is generally in the range of 1×10^{-6}. The regulatory limits under TSCA are driven by balancing economic analyses and exposure analyses, with the exposure analyses also considering adverse health effects other than carcinogenicity.

Under the Resource Conservation and Recovery Act (RCRA), Subtitle D (non-hazardous wastes), the Agency sets standards to protect human health and the environment based on the reasonable probability that municipal solid waste landfills will cause adverse effects. The standards are established considering the "practical capability" of the facilities. The Agency is requiring that States establish ground water protection standard remedies for carcinogens in the range of 1×10^{-6} to 1×10^{-4} (see, 56 *FR* 50978, October 9, 1991).

However, Subtitle C of RCRA (hazardous wastes) contains no provision to consider costs or the practical capability of a facility to meet the standards. The standards developed by the Agency under RCRA Subtitle C are necessary to protect human health and the environment. The Agency has standards that prohibit hazardous waste incinerator emissions for metals from exceeding a summed carcinogenic risk level of 1×10^{-5}.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) directs the Agency to set standards for cleanup by considering the relative degree of risk to human health and the environment. Under CERCLA, the Agency has set standards based on carcinogenic risk levels of 1×10^{-7} to 1×10^{-4}, with 1×10^{-6} as the departure point for the analysis.

As shown, each statute is unique. Therefore, the regulatory approach and limits developed under one statute may not be appropriate for those developed under another statute. Before comparing regulatory requirements, the legal requirements of the authorizing statute must be examined.

In developing a regulatory approach, one of the principles guiding EPA is to establish reasonable standards. Section 405(d)(2)(D) of the CWA requires the Agency to establish management practices and numerical limits that are "adequate to protect public health and the environment from any reasonably anticipated adverse effects of each pollutant." EPA used exposure assessment models to derive these numerical pollutant limits. EPA determined that the exposure assessment assumptions used in its models protect individuals from events that are likely to occur and meets the statutory standard to protect public health and the environment from "reasonably anticipated adverse effects of a pollutant."

Selecting a Regulatory Approach for Part 503

In developing a regulatory approach for establishing the management practices and numerical limits (standards) that would safeguard public health and the environment, the Agency examined the use or disposal practices and the probability that individuals would be exposed to pollutants from these practices. EPA identified the type of the risks involved (e.g., breathing air with higher levels of pollutants, drinking water with pollutant levels exceeding the MCLs for drinking water, and others). It also examined the possibility of special populations at greater risk (e.g., small children playing in gardens where sewage sludge products had been applied or the effect of lead on adult males). The Agency also examined whether individuals voluntarily incurred the risks. For example, risks associated with breathing more contaminated air by individuals living in close proximity to an incinerator are involuntarily incurred and, therefore, more unacceptable than risks associated with using a properly labeled sewage sludge product in a garden. Finally, before developing alternative approaches, EPA used exposure assessment models to project the effect on an individual receiving a maximum dose throughout an average lifespan of 70 years. Aggregate effects analyses were used to project the incidence of adverse health effects from sewage sludge use or disposal on the population as a whole (i.e., the resulting number of cancer cases, carcinogenic risk, number of people exposed to lead at levels producing adverse health effects, and the number of people exposed to concentrations of non-carcinogenic pollutants above a reference dose—RfD).

In considering a regulatory approach, in the proposal EPA primarily focused on two types of risks—risks to individuals receiving the maximum dose (most exposed individual, plant or animal—MEI) and risks to the population as a whole (aggregate risk). The Agency considered four regulatory approaches for the use and disposal of sewage sludge. Each of the approaches places greater emphasis on reducing an individual or other organism's exposure to a pollutant. However, the Agency examined both the individual and aggregate effect of each alternative to balance the uncertainties in the analyses. The data available resulted in greater emphasis being placed on public health rather than environmental effects. However, where environmental effects could be identified, even qualitatively, they were considered in the determination of what constituted "adequate" protection of public health and the environment.

Opinions are divided concerning the emphasis that should be placed on individual or aggregate risk. There are some who maintain that individual cancer risk is the most, or the only,

important measure. Arguments that favor addressing individual risk assert that no individual should be at high risk and that consideration of the number of people at risk leads to acceptance of higher individual risk when few people are exposed. Furthermore, the latter approach leads to the inequity of having the acceptable risk to an individual depend on the number of people similarly exposed. The limitation of using maximum individual risk alone is that the measure does not indicate how many people may be affected. It only relates the carcinogenic risk to the MEI.

Arguments in favor of examining the aggregate risk are that incidence is an appropriate measure of total public health impact. Therefore, incidence is a good indicator of whether an approach adequately protects public health.

A rule that covers both carcinogenic and non-carcinogenic pollutants, such as today's rule, presents another disadvantage to using only an MEI or an aggregate analysis as a single measure of whether an approach adequately protects public health and the environment. Methodologies and data do not yet exist, except for lead, to correlate differing levels of exposure to non-carcinogenic pollutants with incidence of an effect. The only measure for threshold pollutants other than lead is the number of people exposed to a level above a RfD. This, in fact, may have little meaning for individual risk since risk above the RfD cannot be determined using the RfD methodology. The RfD is established such that there is a very low probability that exposure to a pollutant at or below the RfD will cause an individual health case. This also implies that there is no certainty that exposure above the RfD will cause an individual health case. Therefore, while any exposure to carcinogens can be considered a case, the same assumption can not be made for non-carcinogens.

In addition, the Agency typically weighs the aggregate effects estimates along with maximum individual or average cancer risk estimates when evaluating a particular category of like risks (i.e., the number of individuals exposed to a particular pollutant from a particular type of facility). Some observers question the relevance of adding risks, in a rule such as today's rule, when risks from different types of pollutants present different types of risks (i.e., inhalation, ingestion, and others) from different types of sources (i.e., incineration, land application for agricultural purposes, among others).

The following discussion describes the proposed alternative regulatory approaches considered by the Agency in developing the risk assessment methodology used in today's rule. The first two approaches accept the aggregate effects of current sewage sludge quality. Approach III is directed solely to protecting the MEI and Approach IV uses a combination of MEI exposure and aggregate effects of current sewage sludge quality.

Although the combination of approaches in Option IV was the Agency's selection for purposes of the part 503 proposal, it was revised for the final rule based on current Agency policy, public comment and scientific peer review.

Approach I: Use Existing Regulations (Aggregate Approach)

The first approach considered by the Agency was to use existing regulations to establish numerical limits and management practices. In establishing numerical limits for sewage sludge that is incinerated, the Agency would use the NESHAPs for mercury and beryllium in 40 CFR part 61, subparts C and E, respectively; 25 percent of the NAAQSs for lead; and the particulate limitations and monitoring requirements in 40 CFR part 60, subpart O. In addition, the Agency would have also used numerical limits for cadmium and PCBs and the pathogen reduction process requirements in 40 CFR part 257 when sewage sludge is applied to the land. Under this approach, if existing regulations did not address a particular pollutant, EPA would have used the toxicity characteristic pollutant concentrations in 40 CFR part 261 to determine if a sewage sludge was hazardous. Therefore, standards for hazardous sewage sludge would not be established in part 503. All approaches considered by the Agency similarly exclude hazardous sewage sludge from the part 503 standards. As discussed later in the preamble, for purposes of section 405, EPA is regulating hazardous sewage sludge under the requirements in 40 CFR parts 261 through 268 and sewage sludge with 50 ppm or more PCBs under the requirements in 40 CFR part 761.

The first approach was rejected immediately by the Agency because it would misuse the toxicity characteristic concentrations. The toxicity characteristic concentrations were developed to identify pollutant concentrations in wastes that, if placed in improperly managed MSWLFs have the potential to cause an unacceptably high level of ground water contamination. The regulatory thresholds do not purport to define a concentration that would be safe if used for growing food or feed crops. The toxicity characteristic concentrations, if used in the exposure assessment models, would result in concentrations exceeding the human health criteria for the disposal practice. Limiting emission levels of sewage sludge incinerators to 25 percent of the NAAQS for lead would require some incinerators to install wet electrostatic precipitators (ESPs). At present, many States are not controlling lead emissions from sewage sludge incinerators.

Approach II: Use the 98th-Percentile Pollutant Concentration (Aggregate Approach)

The second approach considered by the Agency was to use existing EPA regulations, as in the first approach. However, if existing regulations do not establish numerical limits, numerical limits would be established corresponding to the 98th-percentile pollutant concentration in the Agency's national data base on sewage sludge. The 98th-percentile pollutant concentrations would be calculated from a regression analysis of the values of each pollutant in the national data base and would be used as a cap on allowable pollutant concentrations. This would preclude potential deviations from the pollutant concentrations shown in the national data base and prevent increases in any risks associated with current use and disposal practices. In addition to management practices specified in existing regulations, such as pathogen reduction processes for the land application of sewage sludge in 40 CFR part 257, the Agency would require that labels or information sheets accompany sewage sludge products that are distributed and marketed. These would inform users about the proper use of the product.

Approach III: Use the Exposure Assessment Models for All Practices (MEI Approach)

The third approach that the Agency considered was to use the exposure assessment models in establishing numerical limits for all use or disposal practices. The exposure assessment models allow the Agency to limit not only the concentration of a pollutant in sewage sludge, but also the annual and cumulative loading rates for pollutants when sewage sludge is applied to land used for growing food-chain crops or distributed and marketed.

In the MEI approach, the target organism is a most exposed individual, plant, or animal that remains for an extended period of time at or adjacent to the site where the maximum exposure occurs. EPA used models and 14 exposure pathways to determine the

concentration of sludge-borne pollutants that may be utilized or disposed of in each use and disposal practice without exceeding human health or environmental criteria.

The human health and the environmental criteria used to protect the MEI from the adverse effects of specific pollutants were taken from criteria already published or promulgated by the Agency, from human health criteria developed by the Agency, or from plant and animal toxicity values published in scientific literature. For example, when the objective was to protect sources of drinking water, pollutant limits were developed which would ensure the Agency's maximum contaminant levels were not violated. When the objective was to protect surface water, Water Quality Criteria were used. If the Agency had not published or promulgated criteria for specific pollutants, reference doses listed in the Agency's computerized Integrated Risk Information System were used.

For carcinogens, the risk-specific doses corresponding to an incremental carcinogenic risk level of 1×10^{-5} were used for all use and disposal practices except when sewage sludge was distributed and marketed. For the distribution and marketing of sewage sludge, numerical limits were established to ensure pollutant levels do not exceed a risk-specific concentration corresponding to an incremental carcinogenic risk level of 1×10^{-6}.

For all pathways, the human MEIs were assumed to be the most sensitive individuals continuously exposed over a 70-year lifetime. Ecological MEI endpoints were also conservatively constructed, using the most sensitive species with steady-state duration and concentration of exposure over a critical life period.

Approach IV: Use the Exposure Assessment Models and the 98th-Percentile Pollutant Concentration (The Approach Used in the Part 503 Proposal)

The final approach that the Agency considered, and the one on which the Agency based the part 503 proposal, used a combination of aggregate and MEI analyses (i.e., the second and third approaches). The Agency used existing regulations, the NESHAPs for mercury and beryllium and 25 percent of the NAAQS for lead when sewage sludge is incinerated. EPA also used the exposure assessment models to establish numerical limits, as in the third approach, when individuals are likely to be exposed to high levels of pollutants in sewage sludge or when significant scientific uncertainties exist about the effect of a particular sewage sludge use or disposal practice.

However in this approach, the Agency selected an incremental carcinogenic risk target of 1×10^{-4} for sewage sludge used in the production of agricultural crops, the sale or give-away of sewage sludge products, and the disposal of sewage sludge in monofills. This target was selected because Agency analyses did not indicate a significant aggregate populational carcinogenic risk for these practices. The Agency's analyses did indicate, however, that incineration posed significantly more aggregate populational carcinogenic risk than other use or disposal methods. To reduce this aggregate carcinogenic risk, the Agency proposed regulating the incineration of sewage sludge such that the carcinogens in the emissions would not exceed an incremental unit risk of 1×10^{-5}.

The Agency did consider an incremental carcinogenic risk level of 1×10^{-6} for all practices. This option was rejected because EPA's analyses indicated that such an approach may lead to the incineration of greater volumes of sewage sludge with a potential for increased human health risks. Furthermore, considerable uncertainty remained in projecting the number of cancer cases. Since the number was already small (for other than incineration), increased uncertainty exists in projecting further reductions.

Carcinogenic risk targets were applied pollutant-by-pollutant in all use or disposal practices, except for the organic pollutants in the emissions of sewage sludge incinerators. For incinerators, the Agency set a limit on the total hydrocarbon emissions from a sewage sludge incinerator rather than on each individual organic pollutant. To do this, the Agency developed a weighted average risk-specific concentration for the carcinogenic organic compounds listed in IRIS. The Agency believed that this was comparable to setting a pollutant-by-pollutant risk-specific concentration for the metals in incinerator emissions.

When individuals were unlikely to be exposed to the pollutants in sewage sludge, the Agency proposed setting numerical limits that correspond to the 98th-percentile pollutant concentration in the Agency's national data base on sewage sludge. As in the second approach, the 98th-percentile concentration is a cap on the allowable concentration of a pollutant in sewage sludge that precludes significant deviations from the concentrations shown in the national data base to avoid increased risk from the disposal of sewage sludge.

The 98th-percentile pollutant concentration applied to the application of sewage sludge to land used for non-agricultural purposes (i.e., forests, reclaiming lands, and others), a practice on which human dietary impacts are negligible. The 98th-percentile pollutant concentration also applied to the disposal of sewage sludge on surface disposal sites, which are generally small, located away from population centers, and usually located on property owned by the treatment work. The Agency believed that little, if any, likelihood of exposure to the pollutants from these two use and disposal methods would result.

Comments on the Alternative Regulatory Approaches

The Agency received extensive scientific peer review and public comments on the proposed alternative regulatory approaches. These comments focused on the MEI exposure scenario used to determine human health impacts and on the use of the 98th-percentile technique for deriving numerical pollutant limits for sewage sludge. A description of the commenters' major concerns is presented below.

The Most Exposed Individual Approach

The risk and exposure assessment assumptions and data used in the model pathways for the MEI approach were criticized by many commenters as being inappropriate or too conservative to mirror "real world" situations. For example, many commenters took issue with the Agency's exposure assessment scenario posing an MEI who lives near a sewage sludge disposal site and is exposed continuously (i.e., 24 hours per day) for a 70-year lifetime—used to establish numerical pollutant concentrations in sewage sludge that protect public health. Commenters maintained that such exposures were unrealistic and should be considerably less than 70 years, and that few individuals would be expected to live in the same location for their entire lives. Commenters suggested that the Agency revise the MEI exposure assessment assumptions to reflect more realistic exposure conditions.

Commenters were divided on which risk levels should be used by the Agency to protect the MEI. As discussed earlier, the Agency traditionally establishes standards within a range of 1×10^{-7} to 1×10^{-4}, depending on the statute, surrounding issues, uncertainties, and information bases. Many commenters argued that the risk

levels selected by the Agency (i.e., 1×10^{-4} for all use and disposal practices, except 1×10^{-3} for incineration) were too conservative, while other commenters felt that the Agency was not stringent enough and should lower the risk level to the 1×10^{-6} to 1×10^{-7} range. Some commenters maintained that the same risk level should be used for all use and disposal practices, and that the different risk levels (i.e., 10^{-4} vs. 10^{-3}) used in the proposal were not scientifically justifiable, do not reflect an ample "margin of safety," and fail to consider non-carcinogenic effects. Other commenters suggested that the risk for all regulated pollutants destined for incineration (i.e., four metals and total hydrocarbons) be additive to allow facilities the flexibility to trade off their emissions and still meet an overall additive risk level for the five pollutants of 5×10^{-3}. Still other commenters were supportive of the proposal, stating that the risk levels selected by the Agency to protect the MEI were appropriate for the use and disposal practices regulated and that no change was needed.

Even though many commenters were critical of the risk policy decisions and exposure assessment assumptions and data (e.g., duration of exposure, use of salt/pot studies, soil ingestion rates, and others) used by the Agency in the MEI approach, none of the commenters suggested an alternative regulatory approach that they believed would be more scientifically defensible and provide an adequate level of protection of public health and the environment.

The 98th-Percentile Approach

Many commenters were critical of the 98th-percentile approach stating that the approach had scientific and technical deficiencies and either over or under regulated the use and disposal of sewage sludge, depending on the pollutants of concern and the practice. Further, the commenters maintained that the numerical limits derived from the 98th-percentile approach were not supported by adequate risk assessments and were not substantiated by field studies. These limits could not be considered a substitute for plant and animal exposure pathway analysis and subsequent calculation of numerical limitations by consideration of the pathway analysis.

In addition, may commenters felt that the 98th-percentile approach would reduce the desirability of beneficial use practices because of the increased public perception of a human health or environmental risk. Some commenters suggested that all beneficial use practices should be consistent and use the same risk assessment methodology.

Response to Comments

The Agency agrees with many of the comments provided by the public and scientific peer review committees concerning the risk assessment approach used to develop numerical limitations for the part 503 proposal. The proposed approach (a combination of MEI and 98th-percentile approaches) was necessarily constrained by the adequacy of information and data on the fate, transport and effects of sewage sludge pollutants, parameters and assumptions used in the model pathways and exposure assessment analyses, and on the use and disposal practices.

Furthermore, there is no clear guidance in section 405, which provides only that standards must be adequate to protect public health and the environment against reasonably anticipated adverse effects. There is only limited discussion of how to establish pollutant limits under section 405(d) of the Clean Water Act in the legislative history of the Act (U.S. Congress, Senate, Senator Stafford, 16 October 1986, Congressional Record S16427). Senator Stafford in debate on the legislation stated:

> * * * EPA's rules must also establish numerical limitations for each such pollutant. EPA's rules must protect public health and the environment with an ample margin of safety, and must take care to protect the health of individuals or populations which are at higher risk than the population as a whole.

EPA concluded that its statutory duty to protect against reasonably anticipated adverse effects required it to consider reasonable risks to exposed populations and not the risk associated with highly unlikely or unusual circumstances. Accordingly, the Agency decided to evaluate the risk to a highly exposed individual (HEI), instead of the most exposed individual (MEI), for the final part 503 regulation risk assessment. This more realistically reflects protection of the health of individuals or populations which are at higher risk than the population as a whole.

EPA also decided to retain a 70 year exposure for the HEI in the risk assessment for the final part 503 regulation. The Agency recognizes that the exposure assessment assumption of 70 years of continuous exposure is conservative in the context of a highly mobile society. Further, EPA is aware that the assumption constitutes a simplification of actual conditions. The decision to assume 70-year exposure for standards setting purposes represents, in part, a policy judgment by EPA. EPA believes this assumption is preferable to the less conservative alternatives suggested. Although releases of pollutants from sewage sludge use and disposal practices would reasonably be expected to change over time, such changes cannot be predicted with any degree of certainty. In lieu of discontinuing a practice, facilities may elect to replace or even expand their use or disposal practice and subsequently increase their release of pollutants to the environment. The 70-year exposure duration represents a steady-state exposure assessment assumption that is consistent with the way in which the measure of carcinogenic risk is expressed (i.e., as the probability of contracting cancer based upon a lifetime [70 year] exposure to a unit concentration). Constraining the analysis to an "average" lifetime exposure carries the implication that no one could be exposed for a period longer than the average. Since, by definition, approximately half the population would be expected to be exposed longer than the average, this assumption would tend to underestimate the possible risk to highly exposed individuals and populations.

The Agency agrees that the U.S. population, in general, is highly mobile. However, adjusting the exposure assumptions to constrain the possibility of exposure to pollutant releases from sewage sludge use and disposal practices implies that everyone has the same degree of mobility (e.g., children, the elderly and handicapped) and that exposure during the periods away from the residence are zero. EPA knows this is not the case. In addition, a less-than-lifetime exposure assumption would also have a proportional impact on the estimated risk to highly exposed individuals, suggesting that no individual could be exposed for 70 years. On balance, EPA believes that the present exposure assessment assumption of continuous exposure is consistent with (1) the steady-state nature of the analysis and with (2) the stated purpose of providing an adequate level of public health and environmental protection from any reasonably anticipated adverse effects of pollutants found in sewage sludge. In the Agency's opinion, this exposure assessment assumption, while representing in part a policy judgment by EPA, continues to be preferable to the less conservative alternatives suggested and represents an appropriate one, given the Agency's obligation to protect public health. This is true both in view of the shortcomings of such alternatives and in the absence of

compelling evidence to the contrary. Further, retaining 70-year assumption gives EPA confidence that the population of highly exposed individuals will remain extremely small.

To remedy information gaps in preparing the MEI risk assessment analyses for the part 503 proposal, the Agency used what it believed were "reasonable worst-case" assumptions. Each parameter or assumption has a "margin of safety" associated with it, depending on the accuracy of the data and information supporting it. For example, if the Agency lacked data from sludge/field studies on metals uptake in crops grown for human consumption, data from sludge/pot studies or salt/pot studies was used in the MEI risk assessment analysis. The margin of safety associated with the data from salt/pot studies is greater than the margin of safety associated with data from sludge/pot studies and far greater than the margin of safety associated with data from sludge/field studies. However, given the availability of the data at the time of proposal, the Agency believed that the use of data from salt/pot studies in the absence of data from sludge/pot or sludge/field studies was a reasonable worst-case assumption and provided an adequate level of public health and environmental protection. The problem occurs when a series of parameters and assumptions, each having a large margin of safety, are used in the same exposure pathway assessment. This results in an extremely conservative analysis where the margin of safety for each parameter and assumption has a compounding effect resulting in numerical limitations that appear to be unrealistic and could conceivably over-regulate a use and disposal practice.

A number of commenters supported the Agency's policy decision on setting the acceptable risk level to the MEI at 1×10^{-4} for all use and disposal practices except incineration, which was set at 1×10^{-5}. The Agency disagrees with commenters who proposed that the risk levels selected by the Agency may not be stringent enough, may be too conservative, or may lead to an inconsistent policy allowing different acceptable risk decisions for different use and disposal practices. For the final part 503 regulations, EPA established standards after an evaluation of risks at the same risk levels as those used for the proposed rule. Based on this evaluation, which included new information gathered during and after the public comment period for the proposal, the Agency concluded that the risk levels selected for the proposal were protective of public health, and that different human health effects levels (i.e., the different human health effects for incineration vs. other use and disposal practices) could appropriately result in different acceptable risk decisions but that the proposed risk level for incineration was unnecessarily protective and burdensome.

Information provided by the NSSS, the sludge incinerator study, the scientific peer review committees and the public was incorporated into the aggregate risk assessment for the final rule and showed minimal risk from current sludge management methods (referred to as "pre-Part 503" or "baseline" risk). Sludge incineration, which EPA had believed based on its earlier analysis posed the greatest risk to the widest population, exhibited low baseline risk. Consequently, the Agency decided to evaluate standards for the final part 503 rule that would achieve an HEI risk level no higher than 1×10^{-4} for all use and disposal practices. The Agency disagrees with commenters that argued that our assumptions in describing and protecting the HEI are not conservative enough. For example, in the incineration pathway scenario the Agency assumed that the HEI was exposed to incinerator emissions 24 hours a day for 70 years, and that the HEI was physically located where it would receive the highest annual ground level concentration of pollutant emissions for the entire exposure period. The aggregate risk assessment, which included the effects on highly exposed individuals and subpopulations (HEIs) as well as the population as a whole, was based on many conservative exposure assumptions such as these, and verified that the 1×10^{-4} risk level provided an adequate level of public health protection across all use and disposal practices including incineration. In addition to providing an adequate level of public health and environmental protection, the 1×10^{-4} risk level reduces the regulatory impact of the rule allowing the Agency to regulate the use and disposal of sewage sludge without needlessly burdening the regulated community or negatively impacting beneficial reuse.

In addition, the Agency disagrees that the risk levels for pollutants in sewage sludge that is incinerated should be additive to allow facilities the flexibility to trade-off emissions to meet a higher risk level (e.g., adding a 1×10^{-4} risk level for each of four carcinogenic metals and total hydrocarbons to establish a higher risk level for compliance of 5×10^{-4}). The Agency evaluated the potential for the summed risk of pollutants in sewage sludge to exceed the proposed risk level. Sewage sludge from 30 facilities was evaluated to determine if the total carcinogen risk of the pollutant mixture exceeded the carcinogen risk from the single highest risk pollutant found in the mixture. In all but three cases, a single pollutant dominated the risk. Therefore, the Agency believes that summing the risk would not make a significant difference in complying with the final Part 503 rule regardless of the risk level chosen. Neither does the Agency believe that it would justify the increased administrative burden it would impose on regulatory authorities and permit writers who would need to constantly readjust permits to account for varying mixtures of pollutant concentrations and for new pollutants regulated under future rulemakings.

The Agency agrees with the public and the scientific peer review committees that the 98th-percentile approach is inconsistent with the MEI approach and that numerical limitations derived from the 98th-percentile approach do not ensure protection of public health and the environment because they lack a formal pathway risk assessment.

In preparing the part 503 proposal, the Agency relied on the 98th-percentile approach because it did not have reliable exposure assessment models nor the input data and information needed to conduct a formal pathway risk assessment for certain practices. The Agency believed at the time of the proposal that the 98th-percentile approach would adequately protect public health and the environment because the 98th-percentile pollutant limitations would apply to: (1) The application of sewage sludge to land used for non-agricultural purposes (i.e., forests, reclaimed lands, and others), a practice on which human dietary impacts are negligible and other forms of human and environmental exposure appeared to be low; and (2) the disposal of sewage sludge on surface disposal sites, which are generally small, located away from populated centers and usually located on property owned by the treatment works, and therefore should present little, if any, likelihood of exposure. In addition, the 98th-percentile approach was supported by the Agency's aggregate risk assessment which showed low exposure and minimal human health impacts on the population as a whole from these use and disposal practices. This information further supported the Agency's belief that the 98th-percentile approach was protective of public health and the

environment and acceptable for purposes of proposal.

Since the proposal, the Agency has worked with experts from inside and outside EPA to develop, then refine, the modeling techniques and supporting data to conduct a formal pathway risk assessment for these practices. In addition, the public comments and scientific peer review reports have provided EPA with better data and information that improved the precision and accuracy of certain modeling parameters and assumptions used in the risk assessment to derive numerical limitations for all sewage sludge use and disposal practices. This allowed EPA to establish more realistic numerical limitations without compromising the level of protection of public health and the environment.

Final Action—Risk Assessment Methodology for the Part 503 Rule

Based on public comments, scientific peer review and the record developed in the rulemaking, EPA has selected an approach based on risk to highly exposed individuals (HEIs) and consideration of health protection for higher risk populations (aggregate risk assessment), not an unrealistic worst-case MEI approach. The Agency has decided to use a risk assessment methodology consistent with EPA guidelines and based on (or supported by—in the case of the operational standard for sludge incineration) an exposure pathway assessment using an array of assumptions and modeling parameters some of which are worst-case and others that are more reasonably based. EPA believes that this approach is consistent with the Congressional intent to establish standards "adequate to protect public health and the environment from reasonably anticipated adverse effects of each pollutant."

Thus, EPA evaluated the risk to highly exposed individuals and populations from pollutants found in sewage sludge using different exposure assessment pathways The aggregate risk assessment (which assessed risk to the HEI as well as the population as a whole) showed minimal risk from the use and disposal of sewage sludge under current (pre-part 503) sludge management methods. Therefore, the Agency concluded that if the standards developed under the final part 503 regulations protect the HEI to a cancer risk level no higher than 1×10^{-4} for all sewage sludge use and disposal practices, that risk level is considered an adequate level of public health protection.

Further, EPA also evaluated as part of its risk assessment (also using exposure assessment pathways) other non-carcinogenic health risks and environmental effects from pollutants found in sewage sludge. The risk level of 1×10^{-4} established by the Agency for this rule provided a benchmark for judging the level of protection to the HEI and populations at greater risk from carcinogenic pollutants, but did not constitute a rigid line for making the determination that such risk is adequate to protect public health and the environment from "all reasonably anticipated adverse effects." The Agency recognized early on that consideration of non-cancer risk to individuals and other environmental effects were critical in evaluating the protectiveness of standards promulgated in today's rule.

As a result, in evaluating standards for today's final rule that provide an adequate level of protection of public health and the environment, the Agency set standards not only based on cancer risk but on a series of other health and environmental effects. These include the overall incidence of other serious health effects as well as cancer within the exposed population as a whole (including average exposed and highly exposed individuals) and within special subpopulations, such as children. The Agency also considered effects on plants and animals from exposure to pollutants found in sewage sludge, science policy assumptions, estimation of uncertainties and margin of safety associated with the risk assessment parameters and assumptions, weight of the scientific evidence for human health and environmental effects, other quantified or unquantified health and environmental effects, and other impacts associated with the use and disposal of sewage sludge before selecting the final standards.

Section 405 of the CWA requires EPA to develop regulations for sewage sludge, when used or disposed of, that are protective of public health and the environment. In today's action, the Agency has selected an HEI approach with consideration of the health effects on higher risk individuals and subpopulations and the population as a whole (aggregate risk assessment) to establish numerical pollutant limitations, operational standards and management practices for the use and disposal of sewage sludge. The Agency has concluded that the numerical pollutant limitations, operational standards and management practices will provide an adequate level of protection of public health and the environment from any reasonably anticipated adverse effects of the pollutants found in sewage sludge.

As noted above, EPA employed exposure assessment models to develop risk-based numerical pollutant limits for sewage sludge when it is applied to the land or placed on a surface disposal site. EPA has determined that its statutory duty to ensure adequate protection of public health and the environment requires the Agency to add safety factors to the numerical criteria derived from the exposure assessments.

The decision to include additional safety factors in its protective numerical pollutant limitations serves a second critical objective in this rulemaking. That objective is to promote the use of sewage sludge for its beneficial properties. An important component in promoting the beneficial use of sludge is building public confidence that sewage sludge used to grow the food the public eats is safe. Adding a margin of safety to the model-derived criteria should help courage this.

There are two reasons for adding safety factors to the model-derived numerical criteria.

First, designing these models has required EPA to make a number of assumptions to characterize the exposure to an HEI. Given current modeling tools, in developing the Agency's exposure assessments, it would have been impossible to account for all of the variables in the real-world movement of pollutants from sewage sludge to environmental end points. EPA, as a consequence, made a number of assumptions to reduce the complexity of actual experience. EPA is confident that its exposure assessments (and the resulting risk-derived numerical limitations) generate numerical criteria consistent with protection of public health and the environment. At the same time, EPA recognizes that modelling is not an exact science. Of necessity, there are aspects of its exposure assessment about which the Agency has greater confidence and areas in which, because of data limitations or because the analytical tools are not highly developed, less certainty.

Second, through its exposure assessments, EPA derived numerical limitations for metals that represented the total quantity of metals that could be added to the soil. So long as the total quantity (loading) for the metal is not exceeded, the exposure assessment models predict that there will be no injury to the HEI. The model is unconcerned whether the total quantity of the pollutant is received in a single load or over time. Thus, adopting purely a cumulative loading approach could mean that sewage sludge with extremely

high metals concentrations could be applied to the land so long as the cumulative load is not exceeded.

In developing the final numerical pollutant limitations, the Agency concluded that adoption of a strictly risk-based numerical pollutant limitation may allow degradation of current sewage sludge quality. EPA's aggregate risk assessment shows only small public health effects associated with current use and disposal practices. This confirms what EPA's exhaustive review of data on sludge usage revealed, that is, sludge used at current pollutant concentration levels presents a low risk to public health and that such pollutant levels already have an inherent level of protection. However, its exposure assessment models relied, in part, on data from field studies on sewage sludge applied to agricultural land that represented a range of sewage sludge of different concentrations. The models do not look exclusively at data from the most heavily contaminated sludges or consider ecological systems impacts from sludges applied to non-agricultural lands.

In order to ensure continued protection of public health and the environment, EPA concluded that existing quality of sewage sludge that is applied to land should be "protected" and not allowed to deteriorate above current concentration levels. Implicit in EPA's numerical pollutant limits for land application (and its conclusion that such limits are safe) is the assumption that sludge with low concentrations of pollutants is safe and to downgrade the quality of sludge reduces the protective levels inherent in such limits. In these circumstances, EPA has concluded that its certainty about the protectiveness of the numerical criteria derived from its exposure assessment models for land application is increased by adding margins of safety to the numerical criteria.

Accordingly, the Agency has placed a "ceiling" on the concentration of pollutants in sewage sludge that may be applied to land at the 99th-percentile pollutant concentration from the NSSS survey. The ceiling concentration is the *higher* of the 99th-percentile pollutant concentration or risk-based pollutant limitation and acts as a trigger, dictating when sludge quality is no longer suitable for beneficial use (regardless how it is applied to the land) and must be disposed of. An important purpose of the "ceiling" is to direct the "cleanest" sludges into beneficial use practices, thereby preventing the "dirtiest" sludges from being applied to agricultural land under the veil of beneficial use. In addition, the Agency has "capped" the numerical pollutant limits for land application at the 99th-percentile pollutant concentration found in the NSSS if that concentration is *lower* than the risk-based numerical pollutant limit. The "cap" determines when sludge quality is suitable for beneficial use under the alternative pollutant limit concept or must be applied using cumulative pollutant loading rates (alternative pollutant limits and cumulative pollutant loading rates are discussed below in parts VIII and XI).

The Agency has made these risk policy decisions (i.e., the "capping and ceiling" policies) to provide an additional margin of safety to protect public health and the environment beyond the risk-based standards developed for today's rule, while maintaining sewage sludge quality to encourage sludge utilization consistent with the Agency's beneficial use policy.

In today's action, the Agency has selected an HEI approach with consideration of the health effects on higher risk individuals and subpopulations and the population as a whole (aggregate risk assessment) to establish numerical pollutant limitations, operational standards and management practices for the use and disposal of sewage sludge. It is the Agency's belief that the numerical pollutant limitations, operational standards and management practices will provide an adequate level of protection of public health and the environment from any reasonably anticipated adverse effects of the pollutants found in sewage sludge. The following part, part VIII, describes the exposure assessment methodology for each sewage sludge use and disposal practice that was an outgrowth of the public comments and scientific peer review on the proposed regulatory approach.

Part VIII: Exposure Assessment Methodology and Other Risk Management Issues for Sewage Sludge Use and Disposal Practices for the Final Rule

This part of today's preamble discusses how EPA evaluated exposure and assessed the risk in determining what pollutant limits in the final part 503 rule were needed to protect public health and the environment from pollutants in sewage sludge that is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Included in this part is a discussion of the exposure assessment approach used to develop pollutant limits in both the proposed and final part 503 rule, as well as a discussion of the basis of other technical and non-technical assumptions used in the regulations.

Exposure Assessment Methodology and Risk Management Issues for the Proposed Rule

For the proposed rule, EPA adapted existing models and developed new models to determine the concentration of sewage sludge-borne pollutants that may be applied to the land, placed in sewage sludge-only landfills (monofills), or incinerated without exceeding human health or environmental criteria (Reference Nos. 71, 72, and 79). The models simulate the movement of pollutants into and through the environment with a series of mathematical equations or algorithms. These equations or algorithms link the pollutant disposal or release rates to the concentration of the pollutant that moves into the air, water, or land and, subsequently, reaches a target organism (i.e., plants, animals, and humans). Each algorithm in a model represents one exposure pathway through which sewage sludge-borne pollutants enter and pass through or effect an environmental medium.

The exposure pathways modeled for each use and disposal practice in the part 503 proposal were as follows:

1. Land Application to Agricultural Land
   - Sludge-soil-plant-human (Pathway 1)
   - Sludge-soil-plant-human-future use change (Pathway 1F)
   - Sludge-soil-human-future use change (Pathway 2F)
   - Sludge-soil-plant-animal-human (Pathway 3)
   - Sludge-soil-animal-human (Pathway 4)
   - Sludge-soil-plant-animal toxicity (Pathway 5)
   - Sludge-soil-animal toxicity (Pathway 6)
   - Sludge-soil-plant toxicity (Pathway 7)
   - Sludge-soil-soil biota toxicity (Pathway 8)
   - Sludge-soil-soil biota-predator of soil biota toxicity (Pathway 9)
   - Sludge-soil-airborne dust-human (Pathway 10)
   - Sludge-soil-surface water-contaminated water-toxicity to fish-toxicity to humans (Pathway 11)
   - Sludge-soil-air-human (Pathway 12A)
   - Sludge-soil-ground water-human (Pathway 12W)
2. Distribution and Marketing
   Pathway 1F, 2F, 7, 8, 9, and 11
3. Land Application to Non-Agricultural Land
   Pathway 11 and 12W
4. Monofilling
   Pathway 12A and 12W
5. Surface Disposal
   Pathway 12A and 12W
6. Incineration
   Inhalation of incineration particulates by humans (Pathway 12A)

Both current and future exposures were considered with respect to

conversion of agricultural lands to home gardens (Pathways 1F and 2F). Future conversions of non-agricultural lands to either agricultural lands or home gardens were considered by imposing a 5-year waiting period. However, growth of practices to accommodate future increases in sludge volume or shifting between practices were not considered in establishing the numerical limits.

For all these pathways, the target organism was the most exposed individual, plant, or animal that remained for an extended period of time at or adjacent to the site where the maximum exposure occurred. The models calculate individual pollutant exposure, relying on certain fixed assumptions about the exposure route. For example, the models assumed inhalation of 20 cubic meters of air per day—an individual diet representative of extreme upper-end food consumption—and consumption of two liters of drinking water per day. Other assumptions included in the models were the location of the MEI relative to the site where the sewage sludge is placed and the source of food in the diet of the MEI. The same duration of exposure was used as that assumed in developing the applicable human health or environmental toxicological criteria (allowable doses). For example, where cancer risks were evaluated, the MEI was assumed to be continuously exposed for 70 years. Ecological MEIs were also conservatively constructed, using the most sensitive species with steady-state duration and concentration of exposure.

The Agency selected numerical values for the parameters in the algorithms of each model, translated the models into computer programs, and where appropriate, used the models to calculate the numerical limits in the proposal. The numerical limits derived from the exposure assessment models and pathways were based on human health or environmental criteria already published or promulgated by the Agency, on human health criteria developed by the Agency, or on plant and animal toxicity values published in the scientific literature. The numerical pollutant limits were designed to protect a most exposed individual (MEI) for a lifetime of exposure (except the pathway that addresses exposure of a child) to a pollutant in sewage sludge that is used or disposed. The dose that the MEI could receive for the exposure was the dose allowed by established Agency health criteria (e.g., an RfD for inorganic pollutants for a person who consumes plants grown on sewage sludge-amended soils or a threshold toxic soil concentration for an animal that grazes on sewage sludge-amended soils). Use of these values protects the MEI against the reasonably anticipated effect of a pollutant (e.g., in the case of the cadmium RfD, this represents a level in the human renal cortex not associated with significant proteinuria).

The risk level for the carcinogenic pollutants controlled in the proposed part 503 regulation varied by use or disposal practice. When sewage sludge is incinerated, the numerical limits for beryllium and mercury were based on the NESHAPs for these pollutants, and the numerical limit for lead was based on the NAAQS for lead. When the objective was to protect sources of drinking water, pollutant limits were developed which would ensure the MCLs were not violated. When the objective was to protect surface water, EPA Water Quality Criteria were used.

If the Agency had not published or promulgated criteria for specific pollutants in the proposal, EPA used reference doses listed in IRIS and risk-specific doses corresponding to an incremental carcinogenic risk level of 1×10^{-4}, except when sewage sludge was incinerated. For the incineration of sewage sludge, numerical limits were established to ensure pollutant levels did not exceed a risk-specific concentration corresponding to an incremental carcinogenic risk level of 1×10^{-5}. Terrestrial criteria designed to protect plants or animals were based on toxicity values determined from the appropriate scientific literature.

A complete description of the exposure assessment methodology and risk management issues for the proposal is found at 54 FR 5764–5791. The following sections discuss the exposure assessment pathways modeled in the final part 503 rule, the major comments received on the proposed exposure assessment approach and risk management issues, the critical modifications and risk management decisions made in developing the final exposure assessment approach for each sewage sludge use and disposal practice. A detailed discussion of the exposure assessment methodology (i.e., models, pathways, parameter values, assumptions, and others) and the risk management decisions used to develop numerical limitations for the final part 503 rule can be found in the technical support documents for each sewage sludge use and disposal practice. Information on obtaining these documents is provided in Part XIV—Availability of Technical Informational on the Final Rule.

Exposure Assessment Pathways and Risk Management Issues Evaluated for the Final Part 503 Rule

EPA evaluated 14 pathways of potential exposure to pollutants in sewage sludge for the final part 503 rule. The rule distinguishes between sewage sludge that is applied to the land for a beneficial purpose and sludge disposed of on the land. For the final regulation, EPA looked at potential exposure when sludge is used as a fertilizer or soil conditioner under two generic categories: agricultural land and non-agricultural land. Agricultural land application would include use by a farmer to grow food or feed crops, on pasture and rangeland, use by large agribusiness enterprises as well as use by the home gardener. Home garden use was formerly described as "distribution and marketing" but for the final rule is "sewage sludge sold or given away in a bag or container." Non-agricultural uses include use on forest land, reclamation sites and public contact sites. In the case of agricultural land, EPA evaluated 14 pathways of exposure, for non-agricultural land, 12 of the applicable 14. EPA evaluated 2 pathways of exposure for surface disposal sites. This is the descriptive term the rule uses for sludge that is merely disposed on land either in piles or in sludge-only landfills (also referred to as monofills). For sewage sludge that is incinerated, EPA evaluated a single pathway of exposure—inhalation. Below are the 14 exposure assessment pathways evaluated in the final part 503 rule, followed by a brief description of each pathway:

1. Land Application (Beneficial Use)
   - Sludge-soil-plant-human (Pathway 1)
   - Sludge-soil-plant-home gardener (Pathway 2)
   - Sludge-soil-child (Pathway 3)
   - Sludge-soil-plant-animal-human (Pathway 4)
   - Sludge-soil-animal-human (Pathway 5)
   - Sludge-soil-plant-animal toxicity (Pathway 6)
   - Sludge-soil-animal toxicity (Pathway 7)
   - Sludge-soil-plant toxicity (Pathway 8)
   - Sludge-soil-soil biota toxicity (Pathway 9)
   - Sludge-soil-soil biota-predator of soil biota toxicity (Pathway 10)
   - Sludge-soil-airborne dust-human (Pathway 11)
   - Sludge-soil-surface water-contaminated water-fish toxicity- human toxicity (Pathway 12)
   - Sludge-soil-air-human (Pathway 13)
   - Sludge-soil-ground water-human (Pathway 14)
2. Surface Disposal
   - Sludge-soil-air-human (Pathway 13)
   - Sludge-soil-ground water-human (Pathway 14)
3. Incineration

Sludge-incineration particulate-air-human (Pathway 13)

In situations where the Agency determined that the exposure assessment pathways analyzed for a particular use or disposal practice did not yield adequately protective results, additional management practices were imposed to prevent environmental abuses and to protect public health.

For the assessment, all pathways, except Pathways 3, 5, and 7), assumed the mixing of sewage sludge with 15 centimeters (i.e., 6-inch plow depth) of the surface soil layer (having a mass of 2 million kilograms per hectare) either by mechanical incorporation or by weathering processes. This allowed conversions between pollutant concentrations in soil (in mass of pollutant per unit mass of soil), and cumulative pollutant loading rates for metals (in mass of pollutant per hectare of land) and annual pollutant loading rates for organics (in mass of pollutant per hectare of land per 365-day period).

After first determining the pollutant concentration in the soil that would be allowed (i.e., the maximum pollutant concentration in the soil that, when taken up by a plant and consumed by a target organism, does not produce undue risk) for a particular pathway, the model determines the allowable pollutant loading rate in one of two ways. For metals, the model determines the cumulative pollutant loading rate, the total quantity of metal consistent with no undue risk. This equals the allowable pollutant concentration in the soil multiplied by the mass of the soil in the top 15 centimeters of a hectare of land. The Agency assumed that metals remain in the sludge-soil matrix and that, over time, they become less biologically available to plants.

For organic pollutants, the model determines an annual pollutant loading rate (in kilograms per hectare per 365-day period) by considering the rate of pollutant loss or decay. The model assumes first order decay of organic pollutants; that is, the quantity of an organic pollutant lost per year is directly proportional to the quantity present. With continual annual applications, the concentration of a pollutant gradually approaches a plateau at which the quantity lost each year equals the quantity applied. The annual pollutant loading rate is determined such that the concentration levels off at the allowable soil concentration when sewage sludge is applied over a long period of time.

For all human exposure pathways in the final rule, the maximum allowable intake of pollutants was based on the following EPA health effects criteria: A reference dose (RfD), recommended daily allowance (RDA) or concentration (RfC) for non-carcinogens; a risk-specific dose for carcinogens based on a risk level of 1×10^{-4} for all use and disposal practices; a daily dietary intake derived from a drinking water standard; or a drinking water standard (MCL). The only exception to this is the dust inhalation pathway (Pathway 11).

In Pathway 11, the pollutant concentration in the soil is not permitted to exceed the National Institute of Occupational Safety and Health (NIOSH) workplace air quality criteria if significant quantities of soil become airborne. Assuming that the total airborne dust does not exceed the NIOSH criterion, this pathway was not a limiting pathway for any pollutant in the final rule.

Currently, 100 percent of a Maximum Contaminate Level (MCL) or other health-based standard is used as the reference point in developing numerical pollutant limits in the final part 503 rule. Because the numerical pollutant limits are based on assumptions designed to be protective of highly exposed individuals and the final part 503 regulations control sludge quality before it is used or disposed of, the Agency did not believe that MCLs or other health-based standards used in the exposure pathway assessment required any additional margin of safety beyond the margin of safety provided by parameters used in the pathway to protect against reasonably anticipated worst-case conditions. However, EPA's 1991 Ground Water Protection Strategy emphasizes prevention and recognizes that reaching an MCL or other health-based standard in ground water that is currently or reasonably expected to be used as a drinking water source is a failure of policy. Using a percentage of the MCL or health-based standard (e.g., 50 percent) as the reference point provides a margin of safety that makes the reference point consistent with the prevention policy in the 1991 Ground Water Protection Strategy (i.e., MCL is not reached).

With the publication of the final part 503 regulation, the Agency is soliciting public comment on the use of a percentage of the reference point (i.e., an MCL or other health-based standard) to develop the allowable concentration of pollutants in sewage sludge for the ground water pathway in both the land application and surface disposal risk assessments. EPA is requesting public comments within 90 days of the date of publication of the final part 503 regulation on the use of a percentage of the MCL or other health-based standard as the reference point for the ground water pathway in the land application risk assessment. The Agency will consider the public comments in future amendments to part 503 for the ground water pathway.

The following is a brief summary of each of the pathways analyzed for the final part 503 rule. As discussed previously, a more detailed description of the pathways and the entire risk/exposure assessment methodology can be found in the technical support documents for the rule.

Pathway 1

This pathway evaluates human exposure to crops grown with sludge fertilizer. It is designed to protect consumers who eat produce grown in soil using sewage sludge. The environmental endpoint is an HEI assumed to live in a region where a relatively high percentage of the available cropland receives sewage sludge applications. All crops in the diet could be presumed to be affected. However, it is assumed that the HEI ingests a mix of crops from land on which sewage sludge was applied and from land on which sewage sludge was not applied. For this pathway, 2.5 percent of a consumer's intake of grains, vegetables, potatoes, legumes, and garden fruits is assumed to be grown on sludge-enriched soil.

Pathway 1 evaluates crops grown for human consumption when sewage sludge is applied. Uptake of sewage sludge pollutants is assumed to occur through the plant roots. Direct adherence of sewage sludge or soil to crop surfaces is assumed to be minimal, and crops are assumed to be washed before consumption. The relevant practices for this pathway include agricultural use in commercial enterprises where crops for human consumption are raised, whether in pots (e.g., hothouse production) or in the field (e.g., truck farming).

The exposure evaluated for Pathway 1 in a non-agricultural setting is the exposure of a person who ingests wild berries and mushrooms grown in sludge-amended soils. The exposure to a pollutant in sewage sludge in Pathway 1 is based on (1) the uptake of a pollutant by each type of wild berry and mushroom; (2) a daily consumption of wild berries and mushrooms; and (3) the fraction of different wild berries and mushrooms grown in sewage sludge-amended soil. The HEI for Pathway 1 is a person who lives in a region where sewage sludge is applied to forest, a public contact site, or a reclamation site. The dose for this pathway is the RfD for an inorganic pollutant. Organic

pollutants were not evaluated for this pathway because they do not concentrate in wild berries and mushrooms.

Pathway 2

This pathway evaluates the case in which sludge is added to the soil in a home garden. The major difference between Pathways 1 and 2 is the fraction of food groups produced on sewage sludge-amended soil. For this pathway, as much as 60 percent of the HEI's diet of certain food groups is assumed to be grown in the home garden in which sludge is used as fertilizer.

The HEI for Pathway 2 is the home gardener who produces and consumes potatoes, leafy vegetables, legume vegetables, root vegetables, and garden fruits. These are also consumed, but not produced, by the HEI in Pathway 1. Unlike the HEI in Pathway 1, grains and cereals and peanuts are not included in the crops grown and consumed by the HEI in Pathway 2 because home gardeners do not usually consume grains and cereals and peanuts they grow themselves on sewage sludge-amended soils. For these individuals, the percentage of their diet grown on sewage sludge-amended soil is the percentage of their diet that is homegrown.

Pathway 3

This pathway assesses the hazard to a child ingesting undiluted sewage sludge. The HEI is the child who ingests sewage sludge from storage piles or from the soil surface. It is assumed that the sewage sludge is not diluted with soil when exposure occurs. The sewage sludge ingestion rate used was 0.2 grams (dry weight) per day for 5 years based on the 1989 Agency soil ingestion directive suggesting this value for children at higher risk (U.S. EPA, 1989). For this rule, EPA assumed ingestion at this level would be limited to 5 years.

In Pathway 3, EPA used the integrated uptake biokinetic model (IUBK) instead of extrapolating from cattle data, as had been done earlier for the proposal, to evaluate the effects from lead on children ingesting sewage sludge. The IUBK model used a lead blood level not to exceed 10 micrograms per deciliter, a 30 percent absorption value and a 95th-percentile population distribution to protect the HEI. Using these values in the model results in an allowable sewage sludge lead concentration of 500 parts per million (ppm) generated by the IUBK model. The lead pollutant limit calculated by the Peer Review Committee was based on the observation that body burdens (absorption) of animals fed up to 10 percent of their diet as sewage sludge did not change until the lead concentration in the sewage sludge exceeded 300 ppm. The Agency, therefore, decided to select the more conservative numerical limit for the final part 503 rule to minimize lead exposure to children and set the allowable lead concentration in sewage sludge at 300 ppm for this pathway.

Several reasons support this determination. First, setting the allowable lead concentration at 300 ppm provides an additional margin of safety with respect to lead soil contamination and any threat to the systems of developing children. Because childhood ingestion of dirt is so widespread a phenomenon and the potential consequence so severe, a high order of conservatism is warranted on this point, especially in the context of regulatory decisions authorizing the addition of a threshold pollutant like lead to the environment. In addition, a 300 ppm lead concentration in sludge is consistent with current sewage sludge quality at all but a small number of POTWs. As a result, the societal cost of an additional safety factor is small in comparison to the potential benefits.

Pathway 4

The analysis developed for this pathway is designed to evaluate human exposure from the consumption of animal products. Pollutant limits calculated for this pathway protect a highly exposed human being consuming the tissue of foraging animals that have consumed feed crops or vegetation grown on sewage sludge-amended soils. The HEI is assumed to consume daily quantities of the various animal tissue food groups. The HEI is also assumed to be exposed to a background intake of a pollutant.

Animals may consume forage and grain produced on sewage sludge-amended soil. This pathway depends on plant uptake of a contaminant being proportional to soil concentration of the contaminant. Uptake can occur through the roots with transport to shoots or other edible feedstuffs, or by volatilization from soil to above ground parts of plants.

The allowable pollutant concentration in the soil is the quotient of the allowable pollutant concentration in the feed crop and a crop uptake factor (partition coefficient). The allowable pollutant concentration in the feed crop is determined from: (1) the human intake of pollutant that can be allowed without causing undue risk, (2) typical consumption rates of various classes of animal products, (3) the percentage of each class of animal product assumed to be raised on sludge-amended soil, and (4) a set of uptake factors relating the pollutant concentration in each animal product to the pollutant concentration in the feed consumed by the animal. Forty percent of the HEI's diet of meat, dairy products and eggs is assumed to come from animals consuming feed from soil to which sludge was applied. This is especially warranted in the context of regulatory decisions involving the addition of threshold pollutants to the environment.

For Pathway 4 in a non-agricultural setting, a human consumes meat or products from wild animals that consume plants grown in sewage sludge-amended soil. The meat is assumed to be obtained from hunting wild animals (herbivores) that forage vegetation grown in sewage sludge-amended soil on forest and reclamation sites. The allowable dose for this pathway is the RfD for an inorganic pollutant adjusted for a 70 kilogram person minus the background contribution of the pollutant from air, water, and food. The exposure for this pathway is based on (1) uptake factors relating the pollutant concentration in each animal product to the pollutant concentration in the plant consumed by the wild animal, (2) typical consumption rates of various classes of animal products, and (3) the percentage of each class of animal product assumed to forage on sludge-amended soil.

Pathway 5

This pathway involves the application of sewage sludge to the land, the direct ingestion of this sewage sludge by animals, and finally, the consumption of contaminated animal tissue by humans. The analysis developed for this pathway evaluated pollutant loading limits to protect a highly exposed human consuming the tissue of foraging animals that have incidentally ingested sewage sludge. The HEI is assumed to consume daily quantities of the various animal-tissue food groups as determined by an EPA analysis of the diet. The HEI is also assumed to be exposed to a background intake of pollutant.

A grazing animal can be exposed to direct ingestion of sewage sludge by two quite different methods. The first involves direct ingestion of sewage sludge by livestock, where sewage sludge has been surface-applied to pasture crops. Livestock can ingest sewage sludge adhering to the crops or lying on the soil surface. Each year the grazing livestock are presumed to be exposed to freshly applied sewage sludge with no time for dissipation of the organic pollutants. Alternatively,

sewage sludge can be injected into the soil or mixed with the plow-layer soil, and the grazing livestock ingest the soil sewage sludge mixture. Livestock exposure will obviously be maximized when sewage sludge is directly ingested, and hence this ingestion route is considered in this analysis.

It is assumed that only a small percentage of the grazing livestock's diet is sewage sludge, and that not all of the animal tissue consumed by the HEI is derived from livestock that have been feeding on sewage sludge-amended land. Background pollutant intake by the HEI (i.e., the ingestion of pollutants from all sources other than that associated with the application of sewage sludge to the land) is taken into consideration through data derived by EPA for total background intake.

Pathway 6

This pathway evaluates what level of pollutants in sludge is protective of animals that ingest plants grown on sewage sludge-amended soil. Pathway 6 is designed to assist in setting pollutant loading limits that protect the highly sensitive/highly exposed herbivorous livestock that consumes plants grown on sewage sludge-amended soil. It is assumed that the livestock diet consists of 100 percent forage grown on sewage sludge-amended land and that the animal is exposed to a background pollutant intake. In this pathway, different animals are affected by different pollutants; thus, when a sensitive species has been identified for a pollutant, that species is used in the exposure assessment. Among the species looked at for this pathway were livestock, domestic grazing animals, birds and rodents although not all were reviewed for each pollutant.

Pathway 7

This pathway is designed to evaluate pollutant loading limits that are associated with protection of the highly sensitive/highly exposed herbivorous livestock, which incidentally consumes sewage sludge adhering to forage crops and/or sewage sludge on the soil surface. It is assumed that the percent of sewage sludge in the livestock diet is 1.5 percent and that the animal is exposed to a background pollutant intake. Again, different animals are considered in this pathway when evaluating the different pollutants; thus, when a sensitive species has been identified for a pollutant, that species is used in the exposure assessment.

Pathway 8

This pathway evaluates the risk posed by pollutants in sludge to plant growth. For the plant toxicity pathway, the Agency determined an allowable pollutant concentration in the soil that would be associated with a low probability (1×10^{-4}) of a 50 percent reduction in young plant growth. This value was derived from scientific data relating the growth of young plants and soil contaminant levels. Thus, the allowable pollutant load for this pathway is that load which, after dilution with 15 centimeters of soil, does not exceed the threshold value.

The Agency has determined that the relationship between reduction in growth and reduction in yield is particularly uncertain for metals such as chromium. Phytotoxicity resulting from metals is sensitive to changes in soil pH, plant species and to the degree of metals' binding in the sludge matrix. Based on data provided during the public comment period, EPA concluded that metals remain bound in the sludge matrix and are relatively unavailable biologically. However, the Agency determined that its data base on soil types and plant species sensitivity was limited and that pollutants regulated by this pathway should be "capped" (as discussed earlier) at the 99th-percentile pollutant concentration from the NSSS to provide an additional margin of safety to protect sensitive plant species not fully evaluated in its risk assessment.

Pathway 9

The analysis developed for this pathway is designed to assist in setting pollutant loading limits that protect the highly exposed/highly sensitive soil biota. At this time, limited sludge field data exists that indicate the level at which inorganic pollutants become toxic to soil biota. However, Hartenstein et al. (1980) routinely raised earthworms using sewage sludges, which provided a limited source of data. Evidence does not prove that they are highly sensitive species; however, because of the lack of data for other species, the criteria for this pathway have been set using earthworm data. The criteria are based on a No Observed Adverse Effect Level (NOAEL) for the earthworm *Eisenia foetida*.

Pathway 10

The analysis developed for Pathway 10 is designed to assist in setting pollutant loading limits that protect highly sensitive/highly exposed soil biota predators. Of concern in this pathway, therefore, are sensitive wildlife that consume soil biota that have been feeding on sewage sludge-amended soil. No predator has been singled out as being particularly sensitive to cadmium and lead, but rather the literature has been reviewed to identify what the Agency determined is a pollutant intake level protective of sensitive species in general. This is not the case for PCBs, where clear evidence exists that chickens are a highly sensitive species. Chronic exposure assumes that 33 percent of the sensitive species' diet is soil biota.

Pathway 11

This pathway evaluates human exposure to sludge pollutants through inhalation. The HEI for this pathway is the tractor driver tilling the field. This pathway evaluates the impact of particles that have been resuspended by the tilling of dewatered sewage sludge. The particles are inhaled by a tractor operator.

This pathway assumes that the distance from the driver to the soil surface is one meter, sewage sludge is incorporated to a depth of 15 centimeters, and sewage sludge and soil are well mixed. This HEI is not expected to be exposed to more than 10 milligrams per cubic meter (g/m^3) of total dust. At dust levels at or above this level, the American Conference of Governmental Industrial Hygienists (ACGIH) recommends that individuals work within a closed cab.

Pathway 12

The surface run-off pathway, Pathway 12, is intended to protect beneficial use of surface waters in order to protect human health and aquatic life. This pathway evaluates the risk to surface water associated with run-off of pollutants from soil on which sludge has been applied. The exposure assessment calculates the pollutant concentration in sludge-amended soil that would not result in exceeding a Water Quality Criterion for a pollutant if the soil enters a relatively small stream. The rate at which the soil enters the stream was based on the Universal Soil Loss Equation and a sediment delivery ratio. Water Quality Criteria are designed to protect human health, assuming exposure through consumption of drinking water and resident fish, and to protect aquatic life.

Pathway 13 (Land Application)

In model Pathway 13 for land application practices, the Agency evaluated the exposure of members of a farm household inhaling vapors of any volatile pollutants that may be in the sewage sludge when it is applied to the land. This pathway was considered for six pollutants: benzo(a)pyrene, bis(2-ethylhexyl)phthalate, chlordane, DDT, dimethylnitrosamine; and

polychlorinated biphenyls. These pollutants were originally selected by the Agency as pollutants of concern from the hazard indices screen because of their semi-volatile nature. The Agency did not evaluate the vapor pathway for organic pollutants like benzene, lindane, trichloroethylene, or toxaphene because these pollutants, which are highly volatile, would volatilize in wastewater treatment processes before sewage sludge disposal—either during wastewater aeration or during sludge processing and dewatering—and thus were not considered to be of concern. In addition, non-volatile metals were not evaluated in the vapor pathway.

The vapor pathway assumes that the total amount of pollutant spread in each year would vaporize during that year. Thus, the allowable annual pollutant loading rate is equal to the flux (mass of pollutant per unit area per unit time) that may be allowed to enter the atmosphere without exceeding the allowable pollutant concentration in the air. This concentration corresponds to the RfC, risk-specific dose, or an acceptable daily dose derived from an MCL. A plume model was used to relate the flux to the resulting pollutant concentration in the air. The allowable flux is determined by: (1) the allowable pollutant concentration in the air, (2) the size of the sewage sludge application site, (3) the assumed distance of an individual from the site where the air concentration must be attained, (4) the wind speed; and (5) the degree of atmospheric mixing. The wind direction is assumed never to change, so the HEI always remains in the center line of the plume.

Pathway 13 (Surface Disposal)

In exposure Pathway 13 for surface disposal sites, the Agency evaluated the exposure of an individual inhaling vapors of any volatile pollutants that may be in the sewage sludge disposed at a surface disposal site. The individual (HEI) is assumed to be living at the downwind edge of the site and is inhaling air, at a rate of 20 cubic meters per day for 70 years, that has been contaminated with volatile organic compounds from sewage sludge disposed of at the site.

Volatilization rate coefficients for uncovered cells are calculated with equations that consider constituent parameters including the Henry's Law coefficient, molecular weight and distribution coefficient. The rate of contaminant release through volatilization is estimated separately for a covered site. Contaminant loss to the vapor pathway is diluted into the total volume of air passing within two meters over the site during the period of contaminant release. This box model is used to determine the expected air concentrations to which the HEI is exposed for each unit of concentration vaporized at the downwind edge of the site. The allowable lifetime exposure to each contaminant (based on a risk level of 1×10^{-4}) is then used to back-calculate the allowable loss rate to the vapor pathway. This value is then divided by the fraction of contaminant vaporized to determine the allowable pollutant concentration at the site.

Pathway 13 (Incineration)

In model pathway 13 for incineration, the Agency evaluated the exposure of an individual living in close proximity to a sewage sludge incinerator. This individual is assumed to inhale particulates and gases from the incinerator 24 hours per day, 365 days per year for 70 years. This highly exposed individual is located at a point where the highest annual ground level concentration of incinerator emissions occurs. This pathway was evaluated for five heavy metals: arsenic, cadmium, chromium, lead and nickel and approximately 70 organics which are represented by a surrogate measure of total hydrocarbons.

Risk-specific concentrations of the four carcinogenic metals are established from cancer potency values found in IRIS. An acceptable ground level concentration of lead is established at 10 percent of the NAAQS for lead. Allowable stack emission rates for these five heavy metals are calculated by use of site-specific air dispersion models. Allowable concentrations of the five heavy metals in sewage sludge are calculated by determining the metal removal efficiency across the incinerator and air pollution control device site-specifically and considering the whole sludge feed rate to the incinerator.

Pathway 14 (Land Application)

In this pathway, the Agency evaluated the exposure of individuals who would obtain their drinking water from ground water located directly below a field to which sewage sludge had been applied. The leachate concentration formed in the sewage sludge-amended soil layer is related by a partition coefficient to the pollutant concentration in the soil. In moving down through the unsaturated zone, the peak leachate concentration is reduced by the modeled processes of vertical dispersion (primarily caused by detention of sorbed pollutant), chemical degradation, and metal precipitation.

The allowable pollutant loading rate was thus determined from the MCL that must be met at the ground water interface with no allowance for dilution, the rate of decay of a pollutant, and other factors that affect either the time period for decay or the dispersive smoothing of the peak concentration. These other factors include the recharge or infiltration rate, hydraulic characteristics of the soil, depth to ground water, and the chemical partition coefficient. For some metals, the net ground water electromotive potential (Eh) and ground water pH influence metallic species precipitation out of aqueous solution.

Pathway 14 (Surface Disposal)

In exposure Pathway 14 for surface disposal sites, the Agency evaluated the exposure of individuals who would obtain their drinking water from ground water contaminated by the surface disposal site. Exposure concentrations are predicted based on well locations 150 meters or less downgradient of the site for facilities located over a source of drinking water. Reference drinking water criteria are either MCLs or are based on a risk level of 1×10^{-4} for an HEI who consumes two liters of water per day over a 70-year lifetime.

Numerical pollutant limits for the ground water pathway are derived for both covered (sludge-only landfills—monofills) and uncovered surface disposal sites. Pollutant losses are first partitioned among the three competing loss processes: Volatilization, leaching to ground water, and on-site contaminant degradation. For surface disposal sites other than monofills, the relatively high water content of the sewage sludge received at the site results in an increased rate of seepage from the facility as compared to that estimated for monofills. Once the fraction of contaminant lost to leaching has been determined, a module is used to estimate flow and transport through the unsaturated zone and is linked to a three dimensional analytical model to depict fate and transport in the saturated zone. The linked model considers the extent to which constituent transport in the saturated zone if affected by local mounding of the water table beneath the site. The module accounts for a number of processes including advection, dispersion, adsorption, and degradation. The mass flux into the saturated zone is used as input to the model which couples this source term with aquifer characteristics to predict concentrations.

Comments on the Proposed Exposure Assessment Approach and Risk Management Issues for Land Application Practices

Land Application—Agricultural Practices

As a result of public comments and scientific peer review, many of the assumptions and data used in the exposure assessment methodology to generate numerical limitations for the proposed rule have been changed to reflect more up-to-date information and more realistic exposure scenarios describing the expected conditions on which sewage sludge will be land-applied for agricultural purposes. The following is a discussion of the major comments, responses and actions taken by the Agency in developing the final part 503 regulations for agricultural land application of sewage sludge. A complete discussion of all the comments and the Agency's responses can be found in the Response to Comments Document for the Proposed Part 503 Rule (Reference No. 109). In addition, a more detailed explanation of the Agency's scientific approach can be found in the Technical Support Document for Land Application.

Information on obtaining single copies of these documents can be found in Part XIV—Availability of Technical Information on the Final Rule.

1. Reconstructing Proposed Pathways 11 and 12

Comment: Many commenters suggested that EPA completely reconstruct the surface run-off (proposed Pathway 11), vapor (proposed Pathway 12A), and ground water (proposed Pathway 12W) exposure pathways for agricultural land application practices. They recommended that EPA incorporate better fate and transport models and different modeling assumptions into the exposure assessment (e.g., some commenters criticized the Universal Soil Loss Equation model used in Pathway 11 as too simplistic). In addition, commenters argued (1) that 100 percent of a constituent cannot be available both to volatilize from the site and simultaneously to leach into ground water and (2) that a mass balance methodology should be used to account for partitioning of pollutants across multiple pathways.

Response: The Agency agrees that proposed Pathways 11, 12A, and 12W (Pathways 12, 13, and 14 in the final rule) should be revised to make use of improved models and more realistic modeling assumptions and that a mass balance methodology should be used to account for partitioning of pollutants across these pathways. EPA has made numerous revisions to its exposure assessment pathway models for the final rule. The previous section (Exposure Assessment Approach for the Final Part 503 Rule) briefly summarizes exposure pathways 12, 13, and 14 as well as the other 11 pathways used in the final rule to calculate numerical limits for sewage sludge applied to agricultural land.

The land application exposure assessment is complex and made up of a large number of pathways and parameters. At the time of proposal, the Agency realized that the models used in assessing the risks in developing the proposed limits for the land application of sewage sludge involved a number of uncertainties and technical issues. Consequently, the proposal identified many of these issues and asked for comment. However, in the absence of data or compelling evidence to the contrary, the Agency selected the models and parameters, and constructed the pathways in the proposal to ensure protection of public health and the environment from pollutants found in sewage sludge applied to agricultural land. Based on information and data gathered during the public comment period, the Agency determined that many of the assumptions used in the exposure pathways for the proposal were overconservative, resulting in numerical pollutant limits with an unnecessarily high margin of safety.

Final Action: Exposure pathways 11, 12A and 12W were revised (Pathways 12, 13, and 14 in the final rule) and EPA developed a new methodology that accounts for the partitioning of pollutants between these pathways in response to scientific peer review and public comments. To partition contaminant losses among competing processes, all losses are treated as first-order, and a rate-loss coefficient is calculated for each. The first-order loss rate, the decay or degradation rate for a pollutant, is proportional to the concentration of the pollutant at any point in time. The higher the concentration of the pollutant, the greater the rate of loss. A first-order rate loss coefficient is calculated for each competing environmental process; soil erosion, leaching to ground water and for volatile pollutants, vaporization. Using the rate-loss coefficient a fraction of pollutant lost to each pathway is then determined.

For the land application exposure assessment, EPA partitioned pollutants based on the rate of leaching to ground water, volatilization to air, erosion to surface water, pollutant decay and retention on the land surface. The Agency did not include plant uptake in the mass balance equations since much of the contaminant taken up by plants is not actually removed from the site and may therefore remain available for leaching, erosion or volatilization. The reconstructed pathways for land application practices follow (These pathways also have been reconstructed and the mass balance methodology applied to non-agricultural land application and to surface disposal practices):

Pathway 12—Criteria for the surface water erosion pathway are determined based on the fraction of contaminant lost to surface waters, the dilution of sewage sludge-amended soil with soil from the rest of the watershed, partitioning between the aqueous and adsorbed phases in the stream, and the bioconcentration of the contaminant by aquatic species. The Universal Soil Loss Equation (USLE) is used to describe erosion for both the Sludge Management Area (SMA) and the watershed. While some commenters criticized the use of this model as too simplistic, the Agency believes that USLE provides the most accepted method for developing such a national regulation. This equation incorporates the effect of cover, land topography, support practices, and soil erodibility. USLE is implemented by assuming that land use practices and other characteristics are similar for the SMA and watershed. An allowable reference water concentration is derived based on exposure from ingestion of contaminated fish and drinking water. Criteria are designed to protect an individual who drinks 2 liters of water and eats 40 grams of fish and shellfish per day. The consumption of 40 grams per day represents the 95th-percentile weighted lifetime diet for individuals consuming fish and shellfish.

Pathway 13—The vapor pathway is designed to protect members of a farm household living at the down-wind edge of the site and inhaling volatile organic pollutants from land-applied sewage sludge. The amount of contaminant released into the air per second is estimated as the fraction of contaminant lost to the vapor pathway (determined by the mass balance model) divided by the period of release. A box model is used to dilute the pollutant releases by the amount of additional air which enters a box within 2 meters height above the site. Wind speed is assumed to be 10 miles per hour (about 4.5 meters per second). Maximum contaminant loadings are back-calculated based on a reference air concentration that corresponds to a HEI lifetime cancer risk of 1×10^{-4}.

Pathway 14—This pathway is designed to protect individuals who obtain their drinking water from ground water sources, and it assumes that a well may be located within the treated site. The model assumes that sewage sludge is incorporated into the top 15 centimeters of the surface soil layer. In addition, a reasonable worst-case depth to ground water is assumed to be 1 meter. The allowable pollutant loading is derived from the health-based standard, and it accounts for pollutant degradation and dilution within the aquifer directly below the site. The VADOFT finite element module, a fate and transport mathematical model used for this evaluation, (Reference Nos. 98 and 99) is used to estimate flow and transport through the unsaturated zone and linked to a three dimensional analytical model AT123D (Reference No. 117) to depict fate and transport in the saturated zone. AT123D is used to simulate the horizontal transport of contaminant from the entire land surface to the down-gradient edge of the site. For contaminants entering the saturated zone at the down-gradient edge, no further horizontal transport is simulated.

The Agency believes that revisions made to proposed Pathways 11, 12A, and 12W represent refinements to the models, modeling parameters and assumptions. The Agency also believes that these revisions improve exposure assessment precision and accuracy, yielding results that are consistent with protection of public health and the environment and well within acceptable risk levels established by the Agency. As has been previously noted, the effect of using very conservative assumptions for model parameters is to compound the conservatism resulting in an unreasonably worst-case approach that yields numerical pollutant limits more stringent than required to protect public health and the environment from reasonably anticipated adverse effects.

2. Human Exposure From Diet

Comment: Several commenters stated that the human dietary exposure scenario for agricultural land application and distribution and marketing (D&M—referred to as sewage sludge sold or given away in the final rule) was not properly constructed with respect to the daily dry matter intake of various food groups. Under conditions of long-term exposure, commenters felt that it was not appropriate to use data from the age and sex group having the highest daily consumption in each food group. Some commenters advocated using the approach taken in the human health aggregate risk assessment for the part 503 proposal. This approach used national averages from the Agency Dietary Risk Evaluation System (DRES) dietary data base. DRES is a computerized data base used by EPA's pesticides program to develop pesticide tolerances on crops. The system accounts for total commodity production (both vegetables and animals) in the United States. The Agency's pesticide program uses this data with census information to develop national estimates, grouped by age and sex, of commodity consumption.

One commenter objected to the Agency's assumption that 2.5 percent of the human MEI's vegetable, fruit, and grain diet was from sewage sludge-amended fields in the agricultural land practices exposure scenario. The commenter stated that the Agency estimated that approximately 0.02 percent of the nation's agricultural land was treated with sewage sludge each year. Therefore, no more than 0.02 percent of an individual's diet could originate from food grown on sewage sludge-amended soil. Since the Agency recognized that some individuals would have greater exposure than others, EPA assumed 2.5 percent of the MEI's vegetable, fruit, and grain diet was grown on sewage sludge-amended fields. The commenter maintained that this 100-fold increase based on potentially high consumption of foods grown on sewage sludge-amended fields and obtained from roadside stands was too high and, therefore, unnecessarily conservative. However, another commenter provided limited data showing potentially high consumption of foods grown on sludge-amended fields by farm families.

Response: EPA agrees that a more realistic human dietary exposure scenario should be used in calculating human food-chain risk from consuming plant or animal products that have been grown or raised on sewage sludge-amended fields.

In the proposed rule, the quantity of each of eight food groups in the human diet assumed in the analysis was taken from the Pennington data base for the age and gender group with the highest daily consumption. While the assumed diet includes an average mix of meats, fruits, legumes, grains, and dairy products, the consumption rates were higher than would be expected for a single individual over a lifetime.

In the risk assessment for the proposal, EPA used the highest consumption for all age and sex groups to represent the human diet from 0 to 70 years. As a result, the diet of the teenage male (14–16 years of age) was used to represent the consumption of grains, potatoes, root vegetables, dairy products, and dairy fat. The diet of the adult female (25–30 years of age) was used to represent lamb and lamb fat consumption. Consumption of legumes, garden fruits, beef, beef fat, poultry, poultry fat, pork, and pork fat was represented by the data for adult males (25–30 years of age). The diet of the adult male (60–65 years of age) was used to represent consumers of beef liver, beef liver fat, and eggs. Depending on whether the pollutant being evaluated was organic or inorganic, either total meat consumption or only meat fat was considered in the evaluation. It was assumed that the metals would collect in the total tissue mass, but organic pollutants would be found only in the lipid portion of the exposed animals' tissues. The Agency now believes that the additive effects of these conservative assumptions yielded an unreasonably worst-case exposure assessment approach for the proposed rule.

However, EPA disagrees with the comment that the Agency's assumption for agricultural land practices stating that 2.5 percent of the MEI's diet comes from vegetables, fruits, and grains grown on sewage sludge-amended soil is too conservative. The data from one commenter shows farm families do exist that consume a higher amount of their diet (i.e., vegetables, meat and milk) from fields fertilized with sludge. The Agency reviewed information (Reference No. 9) that estimated the percentage of total available cropland that would be required, based on nitrogen content, to dispose of the total United States sewage sludge production. Estimates for 1985 (based on 1975 data) ranged from 0.49 to 1.98 percent. This estimate could be much higher on a statewide basis, especially in areas where available cropland is small compared to the population size (such as in New Jersey). This assumption was also supported by the EPA Science Advisory Board, which recommended the Agency use 2.5 percent as a reasonably protective value. To date, the Agency has not received any study or data that would suggest a more reasonable or accurate estimate for a national regulation. The Agency believes that it can use a more reasonable assumption for the fraction of food groups grown on sludge-amended fields because other parameters in the exposure assessment for this pathway (e.g., the oral reference dose, the total background intake of pollutants from all other sources of exposure except sludge, the uptake response slope of pollutants in plant

tissue, etc.) are bounding, and to use overconservative assumptions for every model parameter compounds the conservatism beyond "reasonable" worst-case conditions. This is why the Agency did not construct exposure pathways for agricultural land application based solely on data from farm families that consume a higher amount of their diet from crops or animals raised on sludge-amended fields. The Agency believes the agricultural pathways used in the final rule adequately protect farm families because of the compounding affect bounding parameters used in the exposure pathway have en less conservative ones.

As part of EPA's exposure assessment for land application, the Agency evaluated Pathway 2, which is specifically designed to protect HEIs that consume very large portions of their diet (as much as 60 percent) from crops grown in a garden fertilized with sewage sludge. In the final land application regulation, EPA used numerical pollutant limits from Pathway 2 when those limits were more protective of human health and the environment than pollutant limits from other pathways. Therefore, the Agency evaluated each of the 14 exposure pathways for land application but only used the numerical pollutant limit from the pathway that was most protective of public health and the environment regardless of which pathway produced that limit. For example, if a pathway protecting earthworms produced a more protective (lower) pollutant limit than a pathway protecting humans, the final part 503 regulation would use the numerical pollutant limit from the earthworm pathway as the pollutant limit in the final rule. By taking the most protective pollutant limit from the most sensitive pathway, the Agency is assured of protecting both public health and the environment under a variety of reasonably worst-case exposure scenarios.

Final Action: EPA has revised its human dietary exposure scenario for agricultural land application and sewage sludge sold or given away (referred to as D&M in the proposal) to produce more realistic values representing a lifetime average consumption for both sexes analyzed for each food group. This approach is similar to the approach used in the human health aggregate risk assessment for the proposed rule and to the dietary analysis the Agency uses to evaluate risks from pesticides used on human food-chain crops.

The approach for the final rule involves integrating the consumption rates for each sex over their lifespan and calculating a weighted lifetime average value. This approach is based on the same Food and Drug Administration (FDA) data used in the proposal. However in the revised approach, each age-by-sex sample is used to assign food intakes to different age ranges of the population. These ranges are then summed to provide a lifetime average daily intake of each food group in the dietary exposure pathways.

The aggregate risk assessment for the final part 503 rule uses the Agency's DRES dietary data base. The Agency did not use the DRES system in its exposure pathway assessment to develop numerical pollutant limits for the final part 503 rule because the exposure pathways developed by the Agency for sludge required dry weights of vegetables and animal tissue consumed by the HEI and the DRES data is based on wet (fresh) weights. In order to use the DRES system in the exposure pathway assessment for sludge the Agency would have had to convert each vegetable and animal food group to dry weight, which would have introduced another area of uncertainty in the exposure assessment.

In Round Two, EPA is committed to adopting the DRES system for both the aggregate risk assessment and the exposure pathway assessment. The Agency will make the necessary changes in its exposure assessment for sludge to adopt the DRES dietary data base. The Agency is adopting the DRES system to ensure consistency between future part 503 rulemakings and other regulations being developed by the Agency but does not believe that this change will make a significant difference in the numerical pollutant limits compared to the approach used for today's final rule.

3. Fraction of Vegetable Food Groups Home-Produced with Home Garden Fertilizer Products

Comment: Many commenters maintained that the EPA's choice of values representing the fraction of vegetable food groups home-produced with home garden fertilizer products is too conservative. Several of the commenters stated that the data taken from the U.S. Department of Agriculture (USDA) 1965–1966 market-basket survey of U.S. food consumption used to calculate the values in the part 503 proposal were outdated, with the percentage of homegrown foods showing a decreasing trend over time.

One commenter contended that the availability of sewage sludge products is greater in urban areas; therefore, households in these areas have a greater opportunity to use those products in their vegetable gardens than the rural farm dweller. For this reason, the commenter felt that the urban household dweller should be used by the Agency instead of the rural farm dweller. Another commenter argued that the Agency was inconsistent—it assumed the exposed individual was a rural farm dweller growing a high percentage of his own vegetables; but the daily intake values for these vegetables were based on an urban diet. In this case, the commenter felt that either a rural or urban setting should be assumed in both cases for consistency in the final rule. One commenter suggested that the Agency use data for the rural non-farm household instead of the rural farm family because the Agency assumed that the land would be converted from agricultural to residential use in five years.

Response: The Agency agrees that its choice of values representing the fraction of vegetable food groups produced with sewage sludge home garden products was too conservative. It also agrees that it would be preferable to use more recent data to estimate these values for the final rule. The USDA 1965–1966 market-basket survey data used as the basis for the exposure assessment aggregated all U.S. households into rural farm, rural non-farm, and urban categories (Reference No. 56). To be conservative, the Agency chose the rural farm household in the exposure assessment for the proposal. The Agency now believes that this assumption was too conservative because farmers are more likely to use chemical fertilizers or sewage sludge cake rather than the typical bagged sewage sludge products distributed and marketed in commerce.

As indicated by the public comments, the rural non-farm household having a large amount of property but not operating a commercial agricultural farm business would be a more appropriate category for the exposure assessment scenario. However, the latest market-basket survey conducted in 1978 by USDA (Reference No. 57) aggregates the data differently than the 1965–1966 survey. The 1978 survey divides the U.S. population into non-metropolitan, suburban, and central city household categories. The non-metropolitan category merges the rural farm and the rural non-farm households together; but because of the way the survey data was collected, these two sub-categories cannot be easily separated for use in the exposure assessment for the final part 503 rule.

If the Agency were to use the data from the non-metropolitan category to represent the rural non-farm household,

this again would be unnecessarily conservative since the category includes rural farm households who consume a much higher percentage of homegrown food than rural non-farm families. However, data shows that 46 percent of U.S. households produce some of their own food from home gardens (Reference No. 38a), and this information could be used as a conservative method for segregating rural farm and the rural non-farm sub-categories. In addition, the Agency does not believe that the 1965–1966 survey data for urban dwellers or the 1978 survey data for suburban or central city household categories would protect public health if used in the exposure assessment scenario to protect individuals using D&M products to produce homegrown food for personal consumption. The Agency desires that data used in the exposure assessment for the final part 503 rule be suited for the purpose intended and scientifically defensible, and that the results obtained from the data adequately protective of public health and the environment.

Final Action: Based on scientific peer review and public comments, the Agency has decided to adjust the fraction of food groups from the non-metropolitan category of the 1978 USDA survey data by a multiplication factor of 2.17. This factor was derived from the fraction of U.S. households (46 percent) that produce some of their own food from home gardens; it is the basis for deriving the fraction of vegetable food groups homegrown with D&M products used in the exposure assessment for the final part 503 rule. This replaces the rural farm family exposure scenario from the USDA 1965–1966 market-basket survey (Reference No. 56) used in the proposal with the more recent 1978 USDA survey data; it uses a reasonable worst-case estimate of the fraction of vegetable food groups for non-rural farm families that was included in the non-metropolitan category.

4. Fraction of Animal Product Food Groups Derived From Sludge-Amended Soil

Comment: Several commenters argued that the values representing the fraction of meat products derived from sewage sludge-amended soil in the proposed part 503 regulations for agricultural land practices are unrealistically high and based on outdated information from the USDA 1965–1966 market-basket survey (Reference No. 56). The commenters contended that current data on food consumption by rural farm families may show a lower fraction of locally grown livestock consumed by the highest consuming households.

Response: The Agency agrees that it would be preferable to use the most recent information possible to estimate the values representing the fraction of animal product food groups derived from sewage sludge-amended soil in the exposure assessment for agricultural land practices. These values in the proposed regulations were estimated as an average percent of the annual consumption of food which is homegrown by rural farm households. These values were calculated from the USDA 1965–1966 market-basket survey data found in Table 4–14 of the proposed Land Application Methodology. The exposed individual in this assessment was conservatively assumed to consume 44 percent of meat (beef, lamb, and pork), 34 percent of dairy products, 34 percent of poultry, and 48 percent of eggs from farms raising livestock on sewage sludge-amended soil.

The USDA 1965–1966 survey data, used as the basis for estimating the values in the exposure assessment, aggregated all U.S. households into rural farm, rural non-farm, and urban categories. To be conservative, the Agency chose the rural farm household to use in the exposure assessment for the proposal. However, the latest USDA market-basket survey conducted in 1978, aggregates the data differently than the 1965–1966 survey. The 1978 survey divides the U.S. population into non-metropolitan, suburban, and central city household categories. The non-metropolitan category merges the rural farm and the rural non-farm households together; but because of the way the survey data was collected, these two sub-categories cannot be separated for use in the exposure assessment for the final part 503 rule. In addition, the Agency lacks any national information on the consumption of homegrown meat products that would enable it to adjust the data in the non-metropolitan category, previously done for vegetable food groups.

If the Agency were to use the data from the non-metropolitan category to represent the rural farm household, this would not be as conservative as the proposal since it includes rural non-farm families who are not expected to consume a significant portion of animal products raised on sewage sludge-amended lands. However, the Agency believes that using the unadjusted data from the non-metropolitan category would be adequate to protect public health, given other reasonable worst-case assumptions used in the exposure scenario. Further, the Agency does not believe that the 1978 survey data for suburban or central city households would protect public health if used in the exposure assessment to protect individuals consuming meat products from farms raising livestock on sewage sludge-amended soil. As stated earlier, the Agency believes that data, used in the exposure assessment for the final part 503 rule should be suited for the purpose intended, scientifically defensible, and protective of public health and the environment.

Final Action: The Agency has decided not to retain for the final rule the values representing the fraction of animal product food groups based on the USDA 1965–1966 market-basket survey because more recent data are available from the USDA 1978 survey. The Agency believes that while the 1978 data are not as conservative as the 1965–1966 data, they do provide a reasonable worst-case estimate of animal product food groups consumed by rural farm families and are protective of public health given other conservative assumptions used in the exposure assessment.

5. Soil Ingestion Rate for Children

Comment: In the proposal, Pathway 2F (Pathway 3 of the final part 503 rule) used an estimated soil ingestion rate for children of 0.1 grams per day to derive numerical limits for agricultural land practices and D&M. Comments were received on both sides of this issue. Some commenters stated that the rate was too high and that not all the soil ingested would be sewage sludge-amended soil, while others felt it was too low. The range of soil ingestion rates suggested by the commenters was from 0.1 to 0.5 grams per day. The values offered for percent of soil that should be considered sewage sludge ranged from 10 to 50 percent of the total soil ingested. One commenter suggested that the soil ingestion rate should be 0.2 grams per day, because this was the value given in a recent EPA health advisory (Reference No. 96).

In addition, several commenters maintained that the Agency's 10 kilogram body weight assumption is too low for a child, ages 1 to 6, ingesting sewage sludge-amended soil. The commenters felt that it was unreasonable for the Agency to assume a constant body weight of 10 kilograms for a child during a 5-year period in which the body weight usually increases drastically. The commenters maintained that a child MEI typically weighs 10 kilograms for only 1 year, and suggested that the Agency use a 15 kilogram body weight as a more realistic value that would not over estimate the average daily dose for the 5-year period of exposure.

Response: In the exposure assessment approach for the proposed rule, the Agency felt that using children exhibiting pica behavior (i.e., ingesting 0.5 to 5.0 grams of soil per day) as the MEI for the children-eating-soil pathways (Pathway 2F) was too conservative. Instead, the Agency used the average value of 0.1 grams per day as the soil ingestion rate for children. For the proposal, the Agency considered this to be a good estimate of the mean value (Reference No. 101) because all studies of soil ingestion by children were short-term measurements, with no way to estimate (long-term) time-averaged soil ingestion by a child either with pica behavior or who inadvertently ingests soil. The observed variability between children overstates the true variability of long-term exposure.

In addition, EPA did not specifically evaluate the long-term ingestion of pure sewage sludge because the Agency believed that the sewage sludge and soil would be mixed together by mechanical or natural weathering processes (i.e., a mixture ranging from 0.25 to 2.5 percent sewage sludge after dilution with 15 centimeters of soil). Therefore, long-term ingestion of 0.1 grams of sewage sludge-amended soil per day was considered a reasonable expectation.

While the use of an average soil ingestion rate of sewage sludge-amended soil, rather than the use of an ingestion rate associated with a pica child (0.5 to 5.0 grams per day) and pure sewage sludge might be construed as under-protective, other factors suggested that the Agency's analysis may be over-protective. First, the entire 0.1 grams of soil ingested per day was assumed to be composed of sewage sludge-amended soil. In real situations, only a portion of the 0.1 grams per day of soil is likely to be from sewage sludge-amended soil since children are exposed to other sources of household dust and dirt, and from sources of soil outside the home environment. Second, it is unlikely that a child would ingest 0.1 grams of a sewage sludge-soil mixture every day. Third, and possibly most important, the biological availability of sewage sludge-soil-bound pollutants was assumed to be equal to that of the pollutants in food and drinking water. However, evidence indicates that desorption from the soil particles is a very slow process, generally requiring more time than available to material that is traversing the alimentary canal. Such desorption would have to take place before the pollutant could cross the membranes into the blood stream and be transported to sites in the body where it could cause toxic effects. Fourth, because the Agency does not have RfDs for pollutants representing a short term exposure (i.e., a 5-year exposure), lifetime RfDs representing a 70-year chronic exposure were used for pollutants evaluated in this pathway. This over predicts the pollutant-dose the child receives relative to the toxic threshold (RfD) used, because the lifetime RfDs protects the child for 70 years from ingesting pollutants in sludge when in actuality the child would grow out of this "pica-like" behavior in approximately 5 years.

The Agency agrees that the 10-kilogram body weight assumption is too low and may overestimate the average daily dose for a child, ages 1 to 6, ingesting sewage sludge-amended soil. At the time of proposal, studies on blood lead concentrations in children exposed to lead-containing dusts indicate that maximum exposure via hand-to-mouth contacts occur at about 18 months of age where the child's body weight would be approximately 10 kilograms (Reference No. 101).

Final Action: Since the proposal, several groups have examined the ingestion rate and body weight issues and supported research efforts to resolve them. A recent directive from the Agency's Office of Solid Waste and Emergency Response suggested a range of soil ingestion rates of 0.1 to 0.2 grams per day (Reference No. 96) for a 16-kilogram child. For the final Part 503 rule, the Agency has selected 0.2 grams per day as a best estimate of daily sewage sludge ingestion by children with a body weight of 16 kilograms. The Scientific Peer Review Committee on land application recommended that 0.5 grams per day soil ingestion (at the 95th-percentile) would be a more reasonable worst-case exposure level for children (Reference No. 58). However, after further evaluation, the committee agreed that this is an overestimation of chronic risk associated with soil ingestion by children ages 1 to 6.

The Agency believes that using either a sewage sludge ingestion rate of 0.2 grams per day for 5 years or 0.5 grams per day for 2 years will result in the same amount of exposure and will be suitable for modeling children at higher risk. Therefore, the Agency has selected a sewage sludge ingestion rate for children of 0.2 grams per day to use in exposure Pathway 3 to derive numerical limitations for agricultural land practices in the final rule. In addition, the Agency has decided to use the 16-kilogram body weight assumption for children ingesting sewage sludge in this pathway.

6. Ingestion of Soil by Animals

Comment: Seven commenters took issue with the EPA's assumption that 8 percent of a grazing animal's diet contains sewage sludge-amended soil. The commenters considered that the 8 percent sewage sludge/soil ingestion used for Pathways 4 and 6 in the land application exposure assessment for the proposed rule was too high based on chronic sewage sludge ingestion by cattle in field studies where sewage sludge or compost was surface applied to growing pasture. They suggested that a value based on long-term grazing under average field conditions was more appropriate than assuming short-term grazing under poor field conditions. They further stated that in order for pasture-fed livestock to ingest 8 percent of their diet as sewage sludge-amended soil over a lifetime would require an extremely underdeveloped pasture as their sole source of food. In a normal pasture setting, livestock eat the ends of the grass which contains little adhering soil. Pulling up plants with roots and adhering soil attached usually occurs only when adequate developed mature grass is not available. This could occur during extreme drought conditions, but it is not likely for the entire lifespan of the animals. The commenters suggested a range from 1 to 5 percent of the grazing animals' diet be composed of sewage sludge-amended soil.

In addition, the commenters noted that in any one year, the maximum fraction of a farm treated with sewage sludge ranges from 10 to 33 percent, rather than the 100 percent assumed in the proposed exposure assessment. The commenters suggested that the Agency multiply its values by one-tenth to one-third to reflect the actual fraction of acreage set aside for sewage sludge application.

Response: The Agency agrees that the 8 percent ingestion of sewage sludge-amended soil by grazing animals considered in Pathways 4 and 6 for the land application proposed regulations was too conservative (Pathways 5 and 7 in the final rule). EPA assumed that relatively large amounts of soil would be ingested by grazing animals because some studies reviewed prior to developing the proposal had reported these or higher values. The Agency also assumed a dilution of sewage sludge with 15 centimeters of soil when the sewage sludge is applied to pastures. Since the sewage sludge applied to pastures is generally not incorporated into the soil (as it is for row crops), the Agency's assumption relied on climatic conditions and biological factors to assure mixing to the 15-centimeter

depth. The Agency feared that this assumption may underestimate grazing animals ingesting sewage sludge in even greater concentrations than those determined in the exposure assessment model because this assumption depended on incorporation through weathering.

Based on the submission of new information from a long-term study reported by Chaney et. al. (Reference No. 11), the Agency has revised its sewage sludge-amended soil ingestion assumption for grazing animals (Reference No. 58). In the study, sewage sludge ingestion was estimated from season-long analyses of feces of animals grazing in pastures receiving surface-applied liquid sludge or compost. The study concluded that the average intake of sewage sludge was 2.5 percent of a grazing animal's dry diet. Other information indicated that in any one year the maximum fraction of a farm treated with sludge was 33 percent. Therefore, the actual fraction of the grazing animals' diet which is sewage sludge would be lower than 2.5 percent if the animals are rotated among several pasture fields.

The Agency believes that exposure from surface-applied sewage sludge, as shown in the study, represents a much greater potential for ingestion than sewage sludge mixed with the top 15 centimeters of soil used in the exposure assessment pathways for the proposed rule. In addition, whole season data are more appropriate than using single highest results in the exposure assessment because prolonged exposure is usually required before toxic levels can cause adverse effects. The Agency also believes that animals are rotated among several fields and that many farms do not apply sewage sludge to 100 percent of their land in any one year. This would tend to lower the fraction of the livestock's diet affected by recent sewage sludge applications.

Final Action: Based on new information and data submitted during the public comment period, the Agency has revised the maximum fraction of a farm treated with sewage sludge and the sewage sludge-amended soil ingestion assumption for grazing animals used in exposure assessment Pathways 5 and 7 (Pathways 4 and 6 in the proposed rule). The exposure assessment for the final rule used 33 percent as the maximum fraction of a farm treated with sewage sludge and 1.5 percent sewage sludge (season-long average) in the diet of livestock grazing pastures amended 30 days before the animals enter the field. The Agency believes that over time (1) the freshly applied sewage sludge will become mixed with the previously applied sludge and soil surface and (2) grazing livestock can ingest the sewage sludge on the soil surface. The Agency believes, however, that the fraction of farmland treated and the rate of sludge ingestion is significantly less than the 100 percent and 8 percent assumptions used in the proposed rule.

7. Plant Uptake and Phytotoxicity

Comment: Many commenters recommended that Pathway 7 (Pathway 8 in the final rule) be completely removed from the land application exposure assessment model. Commenters stated that because of the complex nature of the soil-plant-sludge interacting system, pinpointing the exact cause of the crop yield response is difficult. Since sewage sludge contains a mixture of potentially toxic chemicals, predicting with a high degree of confidence that any observed adverse effect is a result of a particular pollutant acting alone or the result of synergistic effects from a combination of pollutants acting together is difficult. Furthermore, some commenters believed that this pathway should not be evaluated because it is essentially self-limiting. If a particular quality of sewage sludge caused phytotoxic effects, such as yield reductions, farmers and the public would cease using it.

In the risk assessment evaluation for the proposed rule, phytotoxicity and plant uptake data were chosen based on a selection hierarchy. This hierarchy grouped data from most preferred (i.e., "most like the conditions being regulated") to least preferred (i.e., "least like the expected conditions to be regulated"). For example, the most preferred studies from which to extract data points were performed under sludge/field conditions followed by sludge/pot conditions and the least preferred were pure organic compounds or salt/pot studies.

Numerous public comments were received on this approach. The majority stated that the use of salt or pot studies was an unreasonably worst-case situation that would drastically over-estimate plant uptake and phytotoxicity of sewage sludge pollutants. Studies using salt spikes instead of sewage sludge result in greater bioavailability of the metallic pollutants because they are not bound to an organic matrix and are, therefore, more freely taken up by plant roots.

Likewise, greenhouse studies where plants are grown in pots are known to often over predict uptake compared to field conditions. This is because pots tend to restrict the area of root growth and the small amount of contained soil tends to concentrate and retain the sewage sludge pollutants around the roots, thus accelerating uptake. Under field conditions, precipitation can disperse pollutants into the soil profile so that they are less available to the plants. In fact, numerous differences exist between the pot and field environments, such as the molecular form of the pollutant under consideration.

Response: The EPA disagrees that the phytotoxicity pathway (Pathway 8 in the final rule) should be removed from the land application exposure assessment model because it is self-limiting (i.e., farmers would not use a product that diminishes or eliminates plant productivity). The Agency believes phytotoxic effects should continue to be modeled even if they could become self-limiting. This is because the phytotoxicity effects could be harmful and cause economic losses initially before these effects could be observed. In addition, sewage sludge could be applied to areas that do not have commercially valuable plant species but could still have pollutant-sensitive plant species that exhibit phytotoxicity resulting in secondary environmental impacts, such as erosion. The Agency believes that the public should not have to determine the adverse impacts of using sewage sludge by conducting their own field trials. The potential for adverse outcomes might cause the public to stop using sewage sludge products, thus confounding the Agency's stated policy of encouraging beneficial reuse.

The Agency, however, agrees that sewage sludge/field studies should be used in place of salt or pot studies when such data is available and technically defensible. At proposal, incomplete information was available concerning sewage sludge pollutants, fate, transport and effects, and the means of sewage sludge use and disposal. However, rather than wait for more complete information in order to propose the regulations, the Agency proposed standards for those pollutants and use or disposal practices for which it had sufficient information, and solicited additional information from the public and scientific community during the public comment period. Section 405 specifically contemplates that the Agency will issue regulations based on existing information in stages and revise them periodically.

To remedy information gaps, EPA worked with experts from both inside and outside the Agency during the public comment period to review the basis of the proposal's scientific and technical data. As a result, new information obtained from the scientific

peer review experts and submissions from the public have improved the data used as the basis for the final part 503 rule, which employs mostly sewage sludge/field studies.

Final Action: In the final rule, the Agency has decided to continue to evaluate the phytotoxicity pathway (Pathway 8) as part of the exposure assessment for land application practices and to use, in all possible cases, field data derived from sewage sludge to develop the pollutant transfer co-efficients for this pathway. Much of the field data was provided by scientific peer review and public comment on the proposed rule. This approach has resulted in more realistic values and higher allowable sewage sludge application rates and higher pollutant loading rates for the actual sewage sludge-field conditions regulated. The Agency believes that continuing to evaluate Pathway 8 provides a greater degree of public health and environmental protection, and demonstrates less pollutant uptake in crops as well as a lower incidence of plant phytotoxicity.

8. Minimum Soil pH Requirements

Comment: Many commenters suggested that lack of soil pH control in the proposed rule was a gross oversight on the part of the Agency, because many studies have shown a direct relationship between pH and plant uptake of metals. The commenters maintained that if the Agency used studies conducted at certain pH levels in the exposure assessment models for agricultural land application practices, then those same pH levels should be imposed in the final part 503 rule to ensure consistency between the results predicted from the modeling analysis and those achieved in actual practice. The range of pH levels suggested for the part 503 rule varied from 5.5 to 6.5. However, some commenters objected to pH controls, arguing that higher plant uptake with lower pH is not always the case and that such controls may not be necessary for all agricultural land practices.

Response: The Agency agrees that prudence may require pH control for certain agricultural land practices to ensure that exposure assessment model assumptions and results reflect actual field conditions. In developing the exposure assessment pathways for agricultural land practices, the Agency used data on the plant species most sensitive to pollutants. Depending on the pollutant, the more sensitive species were generally leafy green vegetables, root crops, or legumes. Data taken from phytotoxicity studies generally had soil pH at 6.5 or greater because farmers generally used this condition to maximize crop productivity. A recent review of available data indicates that metal absorption by plants at a soil pH of 5.7 to 6.0 is the same as at a pH of 6.4 oz. greater (Reference Nos. 28 and 113).

The Agency recognizes that soil pH is one of the strongest influences on the capability of plants to absorb pollutants from the sewage sludge/soil matrix. However in some cases, data from low pH studies were also used in the exposure assessment model to develop the numerical limitations for agricultural land practices. Therefore, the Agency believes the numerical limits protect a majority of U.S. soil conditions without requiring pH control for all agricultural land practices regulated under the part 503 rule.

Final Action: The Agency has decided to continue to use studies conducted at pH levels that reflect a majority of U.S. soil conditions to derive the numerical limitations for agricultural land practices as part of the final part 503 rule. The Agency believes that these numerical limitations protect public health and the environment without soil pH control for all agricultural land application practices. The exposure assessment includes data that reflects low pH soil conditions so resulting numerical limits provide an adequate level of protection under a range of soil conditions. The Agency recognizes that unusual conditions not fully outside modeled parameters may not be as protected but believes that this is mitigated by the conservatism of other factors used in the exposure assessment including sensitive species. The result of not regulating minimum soil pH would simply mean that under some unreasonably worst-case conditions the numeric limitations would not be as protective as the reasonably worst-case conditions selected for the final rule.

9. Relative Effectiveness of Exposure

Comment: Several commenters objected to the Agency using a relative effectiveness of exposure value (RE) of one for all pollutants in the exposure assessment for agricultural land and D&M (referred to as "sale or give-away" in the final rule) practices. The commenters felt that sewage sludge-borne inorganic and organic pollutants do not have the same toxic effects on humans and animals when ingested from forage or food grown on sewage sludge-amended fields and that such an assumption is overconservative. Further, the commenters noted that this assumption implies that no observed differences exist in absorption among various exposure routes and that 100 percent of a pollutant from an exposure route is absorbed and taken up by the target tissue. They urged the Agency to try to develop more reasonable estimates of the RE value for the various exposure routes.

Response: The relative effectiveness of exposure value as used in the exposure assessments for agricultural or D&M practices is a unitless factor that shows the relative toxicological effectiveness of an exposure by a given route when compared with another route. (i.e., the relative effectiveness of exposure value relates the toxicological effect of a pollutant to a receiving organism through a specific exposure pathway (e.g., inhalation) instead of a reference pathway (e.g., ingestion through food) used to develop an RfD or Q^* value for a pollutant.) For example, carbon tetrachloride and chloroform were estimated to be 40 and 65 percent as effective when exposure occurs, respectively, by inhalation as by ingestion. In addition to route differences, RE can also reflect differences in the exposure conditions (e.g., absorption of nickel ingested in water has been estimated to be five times greater than when ingested in food).

The Agency agrees that it should develop reasonable estimates of the RE value for the various exposure assessment pathways. However, it is widely recognized that the RE factor should only be applied where well-documented and referenced information is available on the pollutant's pharmacokinetics. When such information is not available, the Agency's policy is to conservatively set RE equal to one to ensure protection of public health and the environment. Since these data were not sufficiently well-documented at the time of the proposal, all of the RE factors used in the risk assessment were assumed to be one.

Final Action: After proposal of the part 503 regulations, the Agency undertook a more extensive literature search to identify the correct RE values for land application practices. For example, studies by Hinesly et al. (1985), in which female chickens were fed diets containing three levels of biologically incorporated cadmium, demonstrated that after 80 weeks the hens retained only 1.3, 0.98, and 0.87 percent of the total ingested cadmium (Reference No. 33). Similar results were obtained from studies with pheasant and sows (Reference Nos. 34 and 30).

Recent data from long-term field studies have shown that sewage sludge properties influence pollutant bioavailability through binding of the

pollutants by the sewage sludge itself. However, the research data base on the fate of many sewage sludge-borne pollutants is still extremely limited. As a result, uncertainties about the health effects and threshold exposures of these pollutants has made the risk/exposure assessment for these pollutants difficult. Therefore, the Agency has decided to continue to use RE values equal to one for those pollutants with limited data but has revised its RE values where sufficient scientifically defensible information was available indicating the bioavailability of the pollutant was less than 100 percent. The Agency recognizes that in some cases this may result in numerical limits that may be more protective than necessary; however, EPA believes that it is prudent to have a balance of mid-range and bounding parameters in order to protect highly exposed individuals.

10. Soil Incorporation and Density

Comment: Three commenters argued that for EPA to assume that surface-applied sewage sludge would be fully mixed in the top 15 centimeters of soil due to climatic conditions and biological factors was unrealistic. They suggested that EPA consider sewage sludge/soil incorporation of less than 15 centimeters. The commenters felt that biological and physical processes would result in some mixing of surface-applied sewage sludge so that animals and humans would not be exposed to undiluted sewage sludge, but they submitted no data to support a particular value.

One commenter criticized EPA for failing to describe how the soil incorporation depth and bulk density values were derived for the proposed rule. The commenter also questioned why these parameters were not evaluated in the proposal's sensitivity analysis.

Response: EPA disagrees that its soil incorporation assumptions are unrealistic. In the proposed rule for agricultural land and D&M practices, the Agency assumed that sewage sludge is incorporated into the top 15 centimeters of the soil. For pathways involving plant absorption of a pollutant, the actual depth of soil incorporation should make relatively little difference. This is true because the mean concentration in the root zone is likely to be more important than the distribution of the pollutant within the root zone. However, for pathways involving direct ingestion of soil by animals or children, the assumed depth of incorporation has greater importance.

EPA recognized that homeowners fertilizing their lawns are unlikely to incorporate the sewage sludge product into an already established lawn. Instead, they would just spread it on the surface where small children could be exposed. Alternatively, animals grazing on pastures may pull up shallow roots with the foliage, thereby ingesting greater concentrations of a pollutant than those assumed in the model. Nevertheless, homeowners or farmers may water the lawn after applying the sewage sludge product, causing the pollutants to migrate into the soil profile. Further dilution may occur as normal precipitation occurs or as worms and small mammals (e.g., moles) burrow into the soil. Emergent vegetation would also tend to disperse the pollutants and make direct exposure to the sludge/soil mixture more unlikely. The Agency believes that man-made and natural conditions are sufficient to ensure soil incorporation of sewage sludge and that the average soil incorporation depth of 15 centimeters is adequate to protect public health and the environment. However, for certain pathways that tend to exhibit a greater exposure to the pollutants in sewage sludge, the Agency assumed 100 percent ingestion of sewage sludge. These pathways are Pathway 3 (child ingesting sludge used in a home garden), Pathway 5 (human who consumes dairy products and meat from animals that ingest sewage sludge), and Pathway 7 (animals consuming sewage sludge adhering to forage crops or on the soil surface).

The Agency agrees that the final rule should show how the values for soil incorporation depth and soil bulk density were derived. However, a sensitivity analysis was not performed on these two parameters for the proposed rule because the Agency did not consider these parameters candidates for site-specific modeling—the test for whether site-specific modeling was appropriate. If site-specific modeling for these factors had been allowed for agricultural land practices, the Agency would have needed to establish the soil type and incorporation depth for each sewage sludge-amended field and to perform exposure assessment modelling based on these local conditions to ensure compliance. The Agency therefore rejected site-specific modelling of these factors for agricultural land practices as being too burdensome to implement and instead established national numerical limitations based on average values for soil incorporation and soil bulk density, 15 centimeters and 1.33 grams per cubic centimeters, respectively.

Final Action: In the absence of new information and data, the Agency has decided to retain the average value for soil incorporation depth (15 centimeters) except for Pathways 3, 5, and 7, and for soil bulk density (1.33 grams per cubic centimeters) in the final part 503 regulations for agricultural land practices and sewage sludge sold or given away for use in home gardens. In addition, the Technical Support Document for Land Application shows the derivation of these two parameters.

11. Background Pollutant Levels in Soil

Two commenters suggested that EPA should establish site-specific inorganic pollutant background levels in soil rather than use a single background level as input into the exposure assessment model for agricultural land practices because background levels of inorganic pollutants vary widely across geographical areas. The commenters said that establishing site-specific background levels for inorganic pollutants would provide more regulatory flexibility and foster beneficial reuse.

One commenter stated that urban soils, where D&M sludge products are widely used, contain higher background concentrations of inorganic pollutants than agricultural soils and that EPA's applying agricultural soil data to urban settings in the exposure assessment for the part 503 proposal was inappropriate.

Another commenter argued that assuming zero background levels for organic pollutants in soil underestimates risk, especially for agricultural soils which could have received heavy applications of chlorinated pesticides before sewage sludge-amendment occurred. In some cases, the background levels of these insecticides in agricultural soils (rarely found in urban settings) can approach the concentrations found in sewage sludge. The commenter suggested that the Agency use average background levels for organic pollutants in soil as the baseline for estimating exposure from further additions of organic pollutants in sewage sludge.

Response: The Agency disagrees that any of its exposure assessment assumptions concerning the background levels of inorganic and organic pollutants are inappropriate for establishing national numerical limitations for agricultural land and D&M practices.

For metals, the Agency used an estimated nationwide median concentration for agricultural lands as the background level of metals in soil. In some cases, the background concentration of a metal is a significant fraction of the maximum allowable soil concentration. In addition, for the terrestrial Pathways 1 through 9

(Pathways 1 through 10 in the final rule), the Agency assumed that once the metal is applied, it remains on the land indefinitely. Since no accounting is made for removal by (1) soil erosion, (2) leaching, (3) volatilization, or (4) absorption of the plant and removal of the harvested portion of the plant, the Agency believes that this assumption offsets the less conservative assumption of using an average value to represent background metals concentrations.

The ability of plants to absorb metals from the soil was assumed to be the same as their ability to absorb metals in sewage sludge. If higher background concentrations of metals were assumed, those numerical limits based on plant toxicity would be more stringent for copper, zinc, and nickel. However in some cases, the higher background concentrations of metals would exceed the allowable pollutant concentration in the soil. At this time, the Agency believes that selecting more stringent background levels is unnecessary and that the levels used in the final rule protect plants from metal toxicity. However, as discussed earlier in the preamble, the Agency plans to investigate the impact sludge has on plants in its monitoring study to determine what role background levels and pH play in the uptake of metals by plants grown on sludge-amended fields.

The Agency also assumed that chromium in sewage sludge and soils is generally in the trivalent, *not* hexavalent, state. According to the EPA publication, "Application of Sewage Sludge to Cropland: Appraisal of Potential Hazards of the Heavy Metals to Plants and Animals," by Council for Agricultural Science and Technology, Report No. 64, November 15, 1976, p. 25 (EPA–430/9–76–013):

> Haxavalent chromium remains as such in a soluble form in soil for a short time but is eventually reduced to trivalent chromium and then changed to forms of low solubility. Haxavalent chromium is toxic to plants, but sludges contain little, if any, haxavalent chromium because it is reduced to the trivalent state during the sewage sludge digestion process.

This conclusion is also supported by the findings of Patterson and Kodukula (JWPCF 56: 432, 1984) who determined metal distributions in activated sewage sludge systems.

For organic pollutants, the exposure assessments for agricultural land and D&M practices were performed to measure only the incremental carcinogenic risk over background levels of organic pollutants, making measuring or estimating the actual organic pollutant background levels unnecessary. In addition, the majority of organic pollutants regulated in the proposed rule have short half-lives (i.e., less than one year) and are not expected to remain in the environment for long periods of time; therefore, they should volatilize or degrade between sewage sludge applications.

Final Action: The Holmgren (1985) database, upon which the median background metal concentration levels for the proposal were based, is considered one of the most thorough analyses of national uncontaminated soils available (Reference No. 35). The Agency has decided, based on reasons discussed previously, to continue to use this database in the final rule to estimate the national median background concentrations for inorganic pollutants in soil. In addition, the Agency has decided to continue to use a zero background concentration level for organic pollutants evaluated in the final rule for agricultural land and D&M practices.

The Agency recognizes that using a national median concentration for inorganic pollutants and zero concentration for organic pollutants to represent all agricultural background pollutant levels would over predict exposure in some cases while under-predicting it in others. However, EPA believes that these assumptions, including other conservative assumptions concerning the fate and transport of metals and organic pollutants in soil, are adequate to protect public health and the environment.

Land Application—Non-Agricultural Practices

In the part 503 proposal, the Agency did not conduct a pathway exposure assessment for non-agricultural land. Instead, EPA proposed to regulate non-agricultural uses through capping sewage sludge concentrations. EPA established numerical pollutant limitations for non-agricultural land application practices using data on existing sewage sludge quality from the "40 City Study." This approach followed a preliminary risk assessment which determined that those practices did not result in high levels of human exposure. Aggregate risk analyses using the proposed numerical limitations did not show significant human health effects on the population as a whole.

The Agency's aggregate risk analysis for non-agricultural land application was based upon the assumption that sludge would be applied to non-agricultural land under the conditions provided in the rule. Among these were restrictions on growing crops and grazing animals. Consequently, these proposed management practices would eliminate any potential for exposure through many of the 14 potential pathways of exposure that had been identified for sewage sludge applied to agricultural land. Moreover, other pathways were not considered because, of their nature, they would not be applicable (e.g., protection of children in a home garden setting). Therefore, the Agency estimated aggregate effects from human exposure to pollutants in sewage sludge applied to non-agricultural land using only two pathways of exposure:

1. Sludge-Soil-Surface Water-Human (Pathway 11); and
2. Sludge-Soil-Ground Water-Human (Pathway 12W)

Using data on national application rates and the two exposure pathways, the Agency estimated that application of sewage sludge to non-agricultural land would result in a maximum individual cancer risk of 2×10^{-8} based upon the 98th-percentile pollutant concentrations shown in the "40 City Study." The 98th-percentile pollutant concentrations were calculated from a regression analysis of the values of 25 pollutants in the "40 City Study." The Agency selected the 98th-percentile concentration to prevent potential deviations from the pollutant concentrations in the "40 City Study" and to prevent increases in any risks associated with the application of sewage sludge to non-agricultural land. The Agency believed that this approach would ensure that sewage sludge quality would not get worse and, therefore, assure the continued validity of the risk assumptions underlying the Agency's regulatory control decisions.

Peer review and public comments raised a number of concerns with permitting the application of sewage sludge to non-agricultural land at 98th-percentile pollutant concentrations. Many commenters were concerned that the proposed approach was arbitrary (an artifact of the "40 City Study") and did not adequately protect public health and the environment. A complete description of the 98-percentile approach and the proposed regulations for non-agricultural land application is found in the proposal at 54 FR 5785–5789, 5798–5800, 5804–5807, 5860–5861, 5868–5871, 5879–5880, 5895.

Comment: Many commenters questioned the Agency's use of the 98th-percentile approach, stating that the approach has scientific and technical deficiencies and either over- or underregulates non-agricultural land application of sewage sludge, depending on the pollutants of concern and the practice. Some commenters stated that the proposed approach would reduce the desirability of the non-agricultural

land practices because of the increased public perception of a human health or environmental risk. Many commenters suggested that the Agency divide non-agricultural land application into different practice categories. This would allow the Agency to tailor its exposure assessment to each non-agricultural land practice category, thereby maximizing alternatives for encouraging beneficial use while protecting public health and the environment.

Many commenters were concerned that the numerical limitations derived from the 98th-percentile approach were not supported by adequate risk assessments or substantiated by field studies. In addition, commenters stated that the 98th-percentile based numerical limitations could not be considered a substitute for evaluating plant and animal exposure pathways. Some commenters stated that the approach for agricultural and non-agricultural land application practices should be consistent.

Response: The Agency agrees with public and scientific peer review comments. The Agency's objective is to encourage the beneficial use of sewage sludge wherever consonant with adequate protection of public health and the environment. To be consistent with other beneficial reuse practices within the final part 503 rule, the Agency developed numerical limitations for non-agricultural land application of sewage sludge after an exposure assessment evaluation similar to that for "agricultural" land application (see earlier discussion in this part). Based on scientific peer review and public comments, the Agency now believes that adequate data is available from direct studies of plants and animals in non-agricultural sewage sludge scenarios (or reasonably interpolated from other sludge studies) to yield valid results when evaluating risk for different non-agricultural land practice categories.

The Agency evaluated all 14 pathways assessed for agricultural land practices for their applicability to use of sewage sludge on non-agricultural land. The Agency believes that not all the pathways (or assumptions used in characterizing these pathways) for agricultural practices are appropriate for non-agricultural land practices. Thus, the Agency has deleted some of the pathways and revised the assumptions used in others to be better suited to a risk assessment for each non-agricultural land practice category. However, the Agency has determined that the new mass balance methodology and revised Pathways 11, 12A, 12W (Pathways 12, 13, and 14 in the final rule) used to establish final numerical limits for "agricultural" land application are also appropriate for non-agricultural practices and do not require further modification.

Final Action: Based on public comments and scientific peer review, the Agency has revised its exposure assessment approach for regulating sewage sludge applied to non-agricultural land (a practice covered under land application). The approach for the final part 503 rule uses an HEI exposure pathways assessment for three categories of non-agricultural land practices: (1) Forest lands, (2) soil reclamation sites (e.g., lands devastated by such situations as natural disasters, strip mined areas, construction sites), and (3) public contact sites (e.g., parks, golf courses, campuses, playgrounds, highway medians, among others).

The Agency recognizes that some of these categories differ from others regarding the method of sewage sludge application (e.g., soil reclamation sites may have only one or more high rate sewage sludge applications over a short time period while public contact sites may have many low rate sludge applications over multiple years). For this reason, the Agency conducted a separate exposure assessment for each non-agricultural land application category. In addition to meeting the numerical limitations, the application of sewage sludge must also meet specific management practices that the Agency is requiring for non-agricultural land application.

The final exposure assessment approach for non-agricultural land practices uses many of the same modeling assumptions, exposure pathways, and target organisms (i.e., HEIs) as were used for agricultural land practices. However, because the Agency recognizes that the two practices do differ, some of the exposure pathways for agricultural land application have been modified for non-agricultural land practices. In addition, different assumptions used within each non-agricultural practice category have resulted in the Agency tailoring the HEI for each exposure pathway specific to the practice category. A detailed discussion of the exposure assessment methodology (i.e., models, pathways, parameter values, assumptions, and others) used for non-agricultural land practices in the final part 503 rule can be found in the Technical Support Document for Land Application. Information on obtaining this and other technical support documents is provided in Part XIV—Availability of Technical Informational on the Final Rule.

Comments on the Proposed Exposure Assessment Approach and Risk Management Issues for Surface Disposal

Surface Disposal—All Practices Except Monofills

In the February 6, 1989, proposal, EPA proposed requirements for the disposal of sewage sludge on a surface disposal site. EPA did not perform a pathway-by-pathway exposure assessment for this method of sludge disposal for purposes of the proposal. The Agency defined "surface disposal site" as an area of land on which only sewage sludge is placed for a period of one year or longer. Surface disposal sites have no vegetative or other cover, are not part of the POTW's treatment process, and are not sites used for temporary storage of sewage sludge prior to final use or disposal. In addition, the proposal did not include monofills under the surface disposal practice and regulated the two practices separately.

As proposed, owners or operators of sewage sludge surface disposal sites would not need to comply with extensive management requirements. This is because the Agency concluded that surface disposal sites generally are small, located in rural areas on lands owned or controlled by local governments, and do not pose a significant threat to public health or the environment. The Agency proposed numerical pollutant limitations for sewage sludge disposed at surface disposal sites based on "current sludge quality" (i.e., the 98th-percentile pollutant concentration shown in the "40 City Study").

Comments/Response: For many of the same reasons explained previously (Land Application—Non-Agricultural Practices—EPA determined that it would be more appropriate to evaluate pollutants destined for use or disposal using an exposure pathway risk assessment methodology), the Agency revised its approach for regulating sewage sludge surface disposal sites. Instead of establishing pollutant limitations based on 98th-percentile sewage sludge quality, which many commenters felt was arbitrary and not adequately protective, EPA used exposure assessment models and pathways to develop numerical pollutant limitations based on risk. The EPA's revised approach for surface disposal sites is very similar to the two-tiered approach used for sewage sludge monofills. A description of the exposure assessment approach for sewage sludge monofills is provided in this part, Surface Disposal—Monofills.

Final Action: In the part 503 proposal, the Agency proposed to establish numerical pollutant limitations based on existing sewage sludge quality for sewage sludge surface disposal sites. This was because of the Agency's preliminary conclusion that such a disposal would not result in high levels of pollutant exposure to potentially exposed individuals. Further, the Agency's aggregate risk analysis did not show significant human health effects on the population as a whole from this disposal practice. To derive numerical limitations based on existing sewage sludge quality, EPA used the 98th-percentile pollutant concentrations from the "40 City Study."

Peer review and public comments suggested scientific or technical deficiencies in using the 98th-percentile pollutant concentrations. Many commenters were concerned that the proposed approach was arbitrary (an artifact of the "40 City Study") and not adequately protective of public health and the environment. As a result, today's final part 503 rule regulates both monofills and surface disposal sites in one category called "surface disposal." The rule uses an exposure assessment approach (similar to the two-tiered approach for sewage sludge monofills) for deriving numerical pollutant limitations for sewage sludge disposed of in piles or trenches at surface disposal sites.

The Agency also evaluated the potential risks to wildlife from monofills and other surface disposal practices as part of today's final rule, and found that wildlife exposure was not significant enough to develop numerical limits using the wildlife exposure pathways for these practices. The Agency has concluded that there could be exposure and potential risk to wildlife that actively forage on surface disposal sites. However, current evidence does not indicate significant levels of foraging or other biological activities that would lead to significant exposure for these practices, and that the management practices required for surface disposal by the final part 503 rule were adequate to protect wildlife. In addition, significant ecological differences generally exist between these disposal practices and land application practices where sewage sludge is applied directly into wildlife habitats and feeding areas (and for which the Agency is promulgating numerical limits and management practices under today's final rule). However, EPA has no reason to believe that exposure is significant for land application practices either, but as discussed earlier in the preamble is committed to studying these practices to ensure that the part 503 regulation protects wildlife.

The conditions within sewage sludge surface disposal sites are physically and biologically different from the conditions at land application sites. For example, because of the physical nature of these sites, active monofills and other surface disposal sites do not appear to provide a suitable habitat (i.e., a place to live) for many species. Daily disposal operations, using trucks, bulldozers, pipelines, and other types of sludge spreaders, are expected to further reduce the likelihood that individual surface disposal sites would be available for wildlife as a feeding source. Therefore, wildlife would generally have to come from habitat areas outside the surface disposal site to feed. Surface disposal sites are often at least partially separated from habitat areas by industrial activity and structures, which would impede access to these sites. Thus, wildlife are not expected to have significant exposure from these practices. Therefore, wildlife exposure pathways for surface disposal practices (including monofills) were evaluated but not used to establish numerical pollutant limitations for use in the two-tiered approach for the final part 503 rule.

Under the two-tiered approach for surface disposal sites, sludge whose concentration would not permit disposal under the first tier would be subject to alternative limitations established under the second tier. The first tier derives one set of national numerical limitations for pollutants found in sewage sludge based on a HEI exposure scenario using two exposure pathways: air, and ground water. The national numerical limitations are established for surface disposal sites without a liner. The models and assumptions used in the exposure pathways to develop the national numerical pollutant limitations are similar to those used to derive the monofill limitations, with certain modifications described below. EPA believes such an approach is reasonable in view of the similarities in likely environmental effects between disposal of sewage sludge disposed of on surface sites and in monofills.

The Agency also evaluated, using the aggregate risk assessment, a second set of national numerical limits for "lined" surface disposal practices. The Agency determined that national numerical limits for "lined" surface disposal sites including monofills were unnecessary because the aggregate risk assessment showed very low baseline risk from current sludge surface disposal methods and the exposure-based national pollutant limits for "lined" practices far exceeded pollutant concentrations found in sewage sludge from the NSSS. The Agency concluded from its evaluation that "lined" surface disposal practices provide more than an adequate level of public health and environmental protection, even in the absence of national numerical limits.

The second tier applies to "unlined" surface disposal sites receiving sewage sludge that contains any pollutant that violates the national numerical limitations established for the first tier. In addition, the second tier also applies to those "unlined" sites where the sewage sludge is disposed within 150 meters of the property line. For those surface disposal sites, the owner or operator of the site or treatment works (if different from that of the surface disposal site), would submit site-specific data to EPA to use in calculating alternative pollutant concentrations for that particular site. The owner or operator (or applicant) will use the same exposure pathways and EPA approved models to calculate alternative pollutant concentrations. A more detailed discussion of the second tier is presented below in the monofill section of this part.

The two exposure pathways modeled by the Agency for evaluating national pollutant limitations or to be used by the applicant to calculate alternative case-by-case pollutant concentrations (using site-specific data) for surface disposal sites are listed below. These pathways are similar to the reconstructed Pathways 13 and 14 (Pathways 12A and 12W in the proposed rule) used for agricultural land practices and monofills, and they employ the same mass balance methodology.

Pathway 13—In exposure Pathway 13, the Agency evaluated the exposure of an individual inhaling vapors of any volatile pollutants that may be in the sewage sludge disposed at a surface disposal site. The exposed individual (HEI) is assumed to be living at the downwind edge of the site and is inhaling air, at a rate of 20 cubic meters per day for 70 years, that has been contaminated with volatile organic compounds from sewage sludge disposed of at the site.

Volatilization rate coefficients for uncovered cells are calculated with equations that consider constituent parameters including the Henry's Law coefficient, molecular weight and distribution coefficient. The rate of contaminant release through volatilization is estimated separately for a covered and uncovered surface

disposal site. Contaminant loss to the vapor pathway is diluted into the total volume of air passing within two meters over the site during the period of contaminant release. This box model is used to determine the expected air concentrations to which the HEI is exposed for each unit of concentration vaporized at the downwind edge of the site. The allowable lifetime exposure to each contaminant (based on a risk level of 1×10^{-4}) is then used to back-calculate the allowable loss rate to the vapor pathway. This value is then divided by the fraction of contaminant vaporized to determine the allowable pollutant concentration at the site.

Calculation of criteria for surface disposal sites through this pathway is similar to the methods described later for monofills. One difference is that the equations used to model emissions are different for surface disposal sites, reflecting the fact that these facilities have a liquid surface throughout their active lifetime. Another difference is that surface disposal facilities are not assumed to receive a soil cover. As with monofills, pollutant contributions are allocated to different media using a mass-balance approach. This calculates the fraction of constituent loss caused by volatilization, leaching, and degradation.

Pathway 14—In exposure Pathway 14, the Agency evaluated the exposure of individuals who would obtain their drinking water from ground water contaminated by the surface disposal site. Numerical pollutant limits for the ground water pathway are derived for surface disposal sites with methods similar to those used for monofills.

Contaminant losses are first partitioned among the three competing loss processes: Volatilization, leaching to ground water, and on-site contaminant degradation. For surface disposal sites, the relatively high water content of the sewage sludge received at the site results in an increased rate of seepage from the facility as compared to that estimated for monofills. Once the fraction of contaminant lost to leaching has been determined, the VADOFT finite element module (a critical fate and transport model used in assessing this pathway) is used to estimate flow and transport through the unsaturated zone and is linked to a three dimensional analytical model AT123D to depict pollutant fate and transport in the saturated zone. For surface disposal sites, the linked model considers the extent to which constituent transport in the saturated zone is affected by local mounding of the water table beneath the site (i.e., increased hydroaulic pressure within the sludge pile on the water table below the site). VADOFT accounts for a number of processes including advection, dispersion, adsorption, and degradation. The mass flux into the saturated zone is used as input to AT123D which couples this source term with aquifer characteristics to predict concentrations. Exposure concentrations are predicted based on well locations 150 meters or less downgradient of the site for facilities located over a source of drinking water. Reference drinking water criteria are either MCLs or are based on a risk level of 1×10^{-4} for an HEI who consumes two liters of water per day over a 70-year lifetime.

Surface Disposal—Monofill Practice

In the part 503 proposal, EPA evaluated two exposure pathways for sludge monofills (also referred to as sludge-only landfills): (1) human exposure to sludge pollutants that infiltrate the ground water and are subsequently ingested from drinking the water (Pathway 12W); and (2) human exposure through vaporization of pollutants from the fill material and their subsequent inhalation (Pathway 12A). The analysis considered the long-term exposure that an MEI would receive from drinking two liters of ground water per day and from inhaling 20 cubic meters of air per day at the property boundary of the monofill. The Agency calculated the combined water and air exposure to the MEI and compared the combined exposure to a MCL, RfC, RfD, or pollutant risk-specific dose. As described as follows, the analytical framework for the ground water model has four components: (1) a calculation of contaminated leachate pulse duration, (2) a model of pollutant behavior and movement in the unsaturated zone, (3) an evaluation of metal solubility in ground water, and (4) a model of pollutant behavior and movement in the saturated zone.

The analysis begins with assumptions on the monofill size and fill thickness, the pollutant concentrations in the sewage sludge, the pollutant concentrations in the leachate, and the net recharge (infiltration) rate. The duration of time, T (years), over which the fill releases a metal pollutant to the unsaturated zone (leachate pulse duration) is then calculated from the following factors: the metal concentration in sewage sludge, CS (milligrams per kilogram); the sewage sludge solids content, SS (kilograms per liter); the fill thickness, D (meters); the assumed leachate concentration, CL (milligrams per liter); the ground water recharge rate, R (meters per year); and the excess liquid in the original sewage sludge volume, EL (liters per liter). The result is:

$$T = ((CS \times SS/CL) - EL) \times D/R$$

The EL term merely adjusts the recharge water budget for excess water in the sewage sludge. For degradable organic pollutants, the above calculation is modified to account for the rate of decay within the fill, as described in the support documents (Reference Nos. 72 and 102).

The above calculation of the leachate pulse duration assumes that leachate concentration remains constant over time until the sewage sludge is completely depleted of the pollutant, thereby modeling the leachate pulse as a mathematical square wave. For any particular inorganic pollutant, the leachate concentration is determined by a solid/liquid partition coefficient and the concentration CS in the sewage sludge.

The leachate pulse (i.e., the initial volume of liquid entering the unsaturated zone containing the initial concentrations of pollutants in that liquid volume from the fill) was then used in the unsaturated zone model, CHAIN (Reference No. 112). CHAIN assumes a steady rate of percolation through the unsaturated zone and calculates the concentrations in the leachate as affected by sorption to the underlying soil and decay (of organic pollutants). The effect of sorption is to reduce peak concentration of the leachate and to slow its movement through the soil. For both metals and organics, sorption to soil is determined by a solid/liquid partition coefficient. The effect of decay is to reduce the overall amount of organic pollutant in the leachate. For organic compounds, decay includes the processes of hydrolysis and anaerobic biodegradation.

In evaluating exposure to the MEI, in the proposal, the depth to ground water is assumed to be zero over Class I ground water and one meter over Class II and Class III ground water. CHAIN is bypassed in assessing exposure to an MEI for monofills located over Class I ground water, but it is used for assessing exposure to an MEI when a monofill is located over Class II or Class III ground water.

At the bottom of the unsaturated zone, the peak concentrations of metals in the leachate pulse, attenuated as calculated by CHAIN (where applicable), are then adjusted for solubility constraints, based on the calculations of MINTEQ. MINTEQ is a computer model which calculates the fraction of metals remaining in solution, and the fraction of metals precipitating out of solution

and attaching to the aquifer-rock matrix (Reference No. 20). The CHAIN model does not actually operate the MINTEQ model but rather, in an iterative manner, uses the results of previous MINTEQ calculations at various conditions of pH and Eh to calculate pollutant concentrations in the aquifer. The MINTEQ solubility adjustments are applied only to the six metals (arsenic, cadmium, copper, lead, mercury, and nickel). At the low pH and high Eh used in the proposed exposure assessment analysis, MINTEQ predicted that copper would be the only metal to precipitate in amounts that would reduce greatly the ground water concentration.

The flux of pollutants entering the aquifer in the area beneath the monofill was then input as a square wave (i.e., the entire pollutant mass or flux entering the aquifer enters it all at the same concentration) at the peak concentration to the saturated zone fate and transport model, AT123D (Reference No. 117). This model calculates the behavior and movement of the contaminant plume, as affected by advection (ground water flow), diffusion and dispersion (mixing), sorption, decay, and distance from the sewage sludge unit to the property boundary of the monofill or 150 meters (whichever is less). For Class II and Class III ground water, the MCL must be met at the property boundary of the monofill or 150 meters, whichever is less. The effect of diffusion and dispersion is to spread the pollutant plume vertically and horizontally, thereby further reducing the peak concentration. AT123D was only operated for Class II and Class III aquifers, since in Class I aquifers the leachate must meet the MCL upon entry to the aquifer.

The components of the model (leachate pulse—CHAIN—MINTEQ—AT123D) were operated in an iterative trial-and-error mode to determine the sewage sludge concentration that produced a peak concentration equal to the MCL at the point of compliance.

The Agency evaluated exposure to pollutant vapors even though dewatered municipal sewage sludge is unlikely to contain significant quantities of highly volatile material. Most volatile pollutants would vaporize before sewage sludge disposal, particularly during wastewater aeration or during sewage sludge dewatering. The model used here (Reference No. 65) has two key components: (1) Calculation of the flux of volatile pollutants into the atmosphere, and (2) determination of the peak air concentration at the property boundary.

The model is formulated so that the vaporization flux depends on the initial concentration of a pollutant in the sewage sludge and on the monofill's cover material. During the time the sewage sludge is assumed to be uncovered, the rate of vaporization is controlled by the rate of diffusion into the air (as opposed to diffusion up through the sludge). The flux is thus formulated to depend primarily on the wind speed and Henry's Law constant (concentration of the pollutant in air divided by the concentration of the pollutant in water at equilibrium).

During the time the monofill is temporarily or permanently covered, the rate of vaporization depends on the rate of diffusion up through air-filled pores in the cover material. The rate thus depends primarily on the cover material's porosity and thickness and on the Henry's Law constant.

The mean flux from the monofill is determined by considering the areas of the monofill expected to be uncovered and temporarily or permanently covered at any time. The concentration at the centerline of a plume downwind of the monofill depends on the size of the monofill, the distance to the point of compliance at the property boundary, the wind speed, and the degree of atmospheric mixing. The wind direction is assumed never to change so that the MEI always remains in the centerline of the plume. The predicted vapor exposure was combined with the predicted drinking water exposure and then compared to the exposure allowed by the MCL, RfD, or risk-specific dose.

Comment: Many commenters maintained that liners should either be required for monofills—thus making the national numerical limitations less stringent or eliminating them—or that site-specific numerical limits be established when physical parameters (e.g., synthetic liners) at the site differ from those used in the exposure assessment pathway. Other commenters advocated requiring liners and eliminating the national numerical limitations.

Response: For many of the same reasons explained previously (Land Application—Agricultural Practices), the Agency revised exposure Pathways 12A and 12W (Pathways 13 and 14 in the final rule) for calculating numerical limits for disposal of sewage sludge in monofills. The reconstructed pathways make use of improved models and more realistic modeling assumptions, and they include a mass balance methodology to account for partitioning of pollutants across the pathways. The Agency believes that these changes should improve the precision and accuracy of model outputs (i.e., numerical pollutant limits) for these pathways and satisfy many of the criticisms received from commenters.

The Agency disagrees that liners should be required for all monofills. However, the Agency agrees that national numerical limitations could be less stringent or even eliminated for sludge-only landfills that have liners provided the exposure pathway and aggregate risk assessments show that such pollutant limits are unnecessary to adequately protect public health and the environment.

A fundamental regulatory principle used in developing the proposed rule was pollution prevention. The Agency believes that it is more protective and equitable to prevent sewage sludge contamination by controlling pollutants at the source than it is to require clean-up of the contaminated ground water. Therefore, controlling the quality of the sludge being used or disposed of is an over-riding objective of the rule. By controlling the source, subsequent contamination of the ground water from sludge-only landfills is of less concern. With this principle in mind, the Agency decided to calculate the proposed national numerical concentrations of pollutants based on the monofill being unlined. However, for the proposal, the Agency did not consider whether a liner would provide such an effective means of pollution control that national numerical pollutant limits would become meaningless as a way of encouraging pollution prevention because the numerical limits would far exceed those pollutant concentrations ever found in sewage sludge. Sludge-only landfills having a minimum EPA liner are just such a case, rendering national numerical limits ineffective as a means of encouraging pollution prevention.

The EPA agrees that owner or operators (or applicants) of monofills should have the option to establish alternative (site-specific) numerical limits when certain physical and ground water quality parameters at the site differ from those used in the exposure assessment pathway. In the proposal, alternative numerical limits were established under three case-by-case circumstances when the physical parameters at a monofill site (excluding all other surface disposal practices) differed from those used in the exposure assessment models. The three circumstances (proposed only for monofills) were as follows:

Case #1—When a monofill has a sewage sludge unit that is less than 150 meters from the property boundary of the monofill, site-specific numerical limits for the pollutants in the sludge would be recalculated. The applicant

would use the actual distance to the property boundary as a factor to estimate the amount of dilution used in the EPA-approved exposure assessment model so that numerical limits would not exceed the human health criteria at the point of compliance (i.e., the property boundary).

Case #2—Numerical limits for those monofills over ground water categorized as Class III(2) could be calculated if the background ground water concentration of one or more pollutants exceeds the EPA MCLs, the risk-specific doses corresponding to an incremental carcinogenic risk level of 1×10^{-4}, or the RfDs, as appropriate. For those pollutants whose background ground water concentrations did not exceed the EPA human health criteria, the national pollutant limits in the proposal applied.

Case #3—If the concentration of one or more pollutants in the sludge exceeded the national limits, the owner or operator could submit documentation showing that site-specific data, rather than the parameters used by the Agency in the model to establish the national limits, could be used in calculating the pollutant concentrations for sewage sludge placed in the monofill. Under the proposal, the numerical limits would be recalculated for all pollutants using the site-specific data that the owner or operator substituted for the EPA parameters used in the model.

The proposal allowed site-specific modeling to derive the numerical pollutant limits for sewage sludge disposed of in monofills. This approach did not preclude the applicant from incorporating into the model the site's artificial characteristics (e.g., a synthetic liner) in addition to its natural characteristics (e.g., a natural clay liner). The applicant was thus not prevented from incorporating the effect that containment measures would have on infiltration or recharge flow rates through the fill material and on the porosity and pollutant sorption beneath the fill. For the proposal, the numerical limits were thus capable of being modified to account for the effect of containment measures such as liners.

Final Action: In order to simplify the final rule and ease the administrative burden on the regulated community, the Agency has broadened the definition of "surface disposal" to include sludge-only landfills (also referred to as monofills) and has developed one set of national numerical pollutant limitations for all "unlined" surface disposal practices.

As discussed earlier in this part, national numerical pollutant limits were evaluated for surface disposal sites with "liners" but were not included in the final rule because EPA determined that "lined" surface disposal practices provide more than an adequate level of public health and environmental protection, even in the absence of national numerical limits, and that such limits would not encourage pollution prevention. This revision condenses the regulations and retains the site-specific modeling option set forth in the proposal for monofills for "all unlined" surface disposal practices meeting certain criteria (the part 503 proposal only allowed the site-specific option for monofills).

In the final rule, EPA used exposure assessment Pathways 13 and 14 to establish national numerical limits. If the physical and ground water quality parameters at the surface disposal site differ from those used in the exposure assessment to derive the national limits, site-specific numerical limits may be recalculated for the site. There are two circumstances in which these site-specific limits are available:

Case #1—When a surface disposal site has a sewage sludge unit that is less than 150 meters from the property boundary of the site, site-specific numerical limits for the pollutants in the sludge may be recalculated. The applicant can use the actual distance to the property boundary as a factor to estimate the amount of dilution used in the EPA-approved exposure assessment model so that numerical limits would not exceed the human health criteria at the point of compliance (i.e., the property boundary).

Case #2—If the concentration of one or more pollutants in the sludge exceeds the national limits, the owner or operator can submit documentation showing that site-specific data (i.e., parameters other than the parameters used by the Agency in the model to establish the national limits) should be used in recalculating the pollutant concentrations for sewage sludge placed in the surface disposal site. In the final rule, the numerical limits may be recalculated for all pollutants using the site-specific data that the owner or operator substituted for the EPA parameters used in the model.

Using an EPA-approved model and the site-specific parameters, the owner and operator (or applicant) will calculate for Agency review and approval alternative pollutant concentrations for the surface disposal site. This approach does not preclude the applicant from incorporating into the model the site's artificial characteristics (e.g., a synthetic liner that does not meet EPA specified minimum requirements) in addition to its natural characteristics (e.g., a natural clay cover or depth to ground water). The site-specific numerical limits are thus capable of being modified to account for the effect of containment measures such as liners.

In addition, in the final rule, the Agency has established one set of national numerical limitations using two revised exposure assessment pathways (Pathways 13 and 14). The national pollutant limits are established for all surface disposal practices without an EPA specified minimum liner including sludge-only landfills without a liner. As discussed above, the final part 503 rule does not require sewage sludge to meet national numerical pollutant limits if disposed of in or on a surface disposal site with an EPA specified minimum liner. If the sewage sludge that a treatment works wishes to place in an unlined surface disposal site (i.e., a site without the EPA specified minimum liner) continues to exceed the national numerical limits or the site-specific numerical limits calculated for the site on a case-by-case basis, the treatment works must either reduce the concentration of the pollutants through more stringent local pretreatment limits, install an EPA specified minimum liner, or find an alternative way of managing the sewage sludge. The revised exposure pathways used in the final rule to evaluate and develop national numerical pollutant limits for sludge-only landfills (a practice cover under the definition of "surface disposal") are as follows:

Pathway 13—The vapor pathway is designed to protect an HEI living at the downwind edge of the site and inhaling air at a rate of 20 cubic meters per day for 70 years that has been contaminated with volatile organic compounds. Volatilization rate coefficients for uncovered or covered landfill cells are calculated with equations that consider constituent parameters, including the Henry's Law coefficient, molecular weight, and distribution coefficient. The rate of contaminant release through volatilization is estimated separately for its covered and uncovered states. Contaminant loss to the vapor pathway is diluted to the total volume of air passing within two meters over the site, during the period of contaminant release. This box model is used to determine the expected air concentrations to which the HEI is exposed for each unit of concentration vaporized. The allowable lifetime exposure to each contaminant (based on a risk level of 1×10^{-4}) is then used to back-calculate the allowable loss rate to the vapor pathway. This value is then divided by the fraction of contaminant

vaporized to determine the allowable concentration at the site.

Pathway 14—As in Pathway 13, the first step in calculations for this pathway is to partition contaminant losses among the three competing loss processes: volatilization, leaching, and contaminant degradation. This calculation requires an estimated first-order loss coefficient for leaching, calculated based on an assumed equilibrium partitioning of pollutant between adsorbed and dissolved phases within the monofill, and on an assumed rate of seepage from the facility. Once the fraction of pollutant lost to leaching has been determined, the VADOFT finite element module is used to estimate flow and transport through the unsaturated zone and is linked to a three-dimensional analytical model (AT123D) to depict fate and transport in the saturated zone. VADOFT accounts for a number of processes including advection, dispersion, adsorption, and degradation. The mass flux in the saturated zone is used as input to AT123D, which couples this source term with aquifer characteristics and chemical properties. Exposure concentrations are predicted based on well locations 150 meters or less downgradient of the site for facilities located over a source of drinking water. Reference drinking water criteria are based on either MCLs or an HEI who consumes two liters of water per day and a risk level of 1×10^{-4}.

Comments on the Proposed Exposure Assessment Approach and Risk Management Issues for Incineration

The Agency used a single exposure pathway, inhalation of sewage sludge incinerator emissions, in analyzing exposure to the MEI for the proposed rule. In developing the proposal, the Agency evaluated the inhalation of sewage sludge incinerator emissions of arsenic, beryllium, cadmium, chromium, lead, mercury, nickel, and total hydrocarbons. Total hydrocarbons were used as a surrogate for all organic pollutants.

The Agency performed air quality modeling to determine allowable concentrations in sludge that translate to pollutant emission rates (mass per unit time) that would not impose undue risks to an MEI in the vicinity of the incinerator. In the case of total hydrocarbons, the allowable emission rate determined by modeling was the numerical limit for the purpose of the proposed standard. For metals, an allowable sewage sludge concentration was derived from the allowable emission rate.

The Agency evaluated the inhalation of beryllium and mercury during development of National Emission Standards for Hazardous Air Pollutants, which specify allowable emission rates. For the proposed rule, the Agency took the NESHAPs values to be the allowable emission rates of beryllium and mercury for sludge incinerators.

The analysis of the inhalation of incinerator emissions employed atmospheric dispersion modeling to relate emission rates to ground level exposure concentrations. As discussed below, the allowable emission rate was determined from (1) the allowable ambient air quality concentration at ground level (the risk-specific concentration), (2) the stack height of the incinerator and other physical characteristics of the site, and (3) the meteorological conditions of the site. The allowable sewage sludge quality was then determined by the above allowable emission rate, the rate of sludge incineration, and emission control efficiency.

For the proposal, the allowable ambient air concentration was set to correspond to a risk-specific dose for four carcinogenic metals (arsenic, cadmium, chromium, and nickel), assuming that the MEI inhales 20 cubic meters of air per day and that indoor and outdoor air concentrations are essentially equal. Sewage sludge incinerators were allocated an air-shed contribution of lead that corresponded to 25 percent of the National Ambient Air Quality Standard.

The allowable ambient air concentration for total hydrocarbons was based on (1) statistical relationships between the concentration of total hydrocarbons and the concentrations of specific organic pollutants emitted by the four sewage sludge incinerators that were tested and (2) the assumed cancer potency of the specific organic pollutants. To develop a site-specific risk-based concentration for total hydrocarbons in the proposal, the Agency developed a weighted carcinogenic potency (referred to as Q_1* or Q*) value for the organic compounds that were projected to be in the emissions of a sewage sludge incinerator. In developing the Q* value, the Agency multiplied the Q* value of every carcinogenic organic pollutant listed in IRIS by the weighted fraction of the compound in the emissions of sewage sludge incinerators. Calculating a weighted fraction of a compound in the emission required a two step process.

First, the Agency determined the concentration in micrograms per cubic meter (ug/m^3) for the pollutant in the emissions in one of three ways. If the compound was measured in the emissions of a sewage sludge incinerator during one or more EPA tests, the 95th-percentile of the measured concentrations for the compound was used. In the case of compounds expected to be present because they are commonly found in other combustion emissions (e.g., emissions from municipal waste combustors or hazardous waste incinerators) but not detected, the concentrations of these compounds in emissions from these sources (ug/m^3) were used. Finally, for the remaining pollutants listed in IRIS and not detected in the emissions of sewage sludge incinerators, an analytical detection limit of 0.1 ug/m^3 was assigned to those pollutants. The Agency then calculated a weighted fraction for each pollutant by dividing the sum of all the pollutant concentrations into each individual pollutant concentration. Then the weighted fraction of each pollutant was multiplied by the pollutant's cancer potency value (Q*) and the resulting product was summed to give a weighted carcinogenic potency value for all carcinogenic pollutants detected or not detected.

Weighted fractions were also calculated for all non-carcinogens that have a reference dose in IRIS. However, the Agency assumed that the actual ambient air concentration of the non-carcinogens (i.e., threshold pollutants) would not exceed their inhalation RfDs and, therefore, do not contribute to the weighted Q* value or cause adverse health effects. The weighted Q* value was calculated as 0.013 (milligrams per kilogram per day)$^{-1}$.

From the Q* value, the Agency developed a risk-based concentration (RSC) for THC of 2.69 ug/m^3 used in the proposal. This value represents the lifetime average exposure to THC that would yield a risk of 1×10^{-5} for the most exposed individual. The proposal used the RSC in a simple equation to develop a site-specific numerical limit for the maximum allowable THC concentration in the facilities incinerator emissions. This calculated numerical limit is compared to the oxygen-corrected total hydrocarbon reading from the flame ionization detector to determine if the incinerator would be in compliance with the facility's permit.

Three models were used in the proposal for incineration to derive emission dispersion factors: ISCLT, LONGZ, and COMPLEX I (Reference No. 74). ISCLT is intended for urban or rural situations where the terrain elevations do not exceed the stack height. It

considers the aerodynamic effect of building downwash, which is likely to be significant for many sewage sludge incinerators with short stacks. The other two models do not evaluate building downwash but are more appropriate in situations where terrain elevations exceed the stack height. Such terrain is termed complex terrain. LONGZ is intended for complex urban terrain, while COMPLEX I is intended for complex rural terrain.

All three models require data on the incinerator, the surrounding terrain, and the meteorology of the site where the incinerator is located. Incinerator data included stack height, stack exit diameter, gas flow, and gas temperature. Meteorological data included joint frequency distributions of wind direction, wind speed, and atmospheric stability. The location of the MEI was not specified beforehand, but it was set at the location predicted by the model to have the highest long-term average ground level concentration.

In assessing the exposure to the MEI, ISCLT was used because of its ability to simulate building downwash. Since the MEI location for facilities with significant downwash tends to be close to the incinerator, the inability to simulate complex terrain accurately was not considered a serious shortcoming. Side-by-side comparisons of the three models indicated that, where downwash is significant, ISCLT predicts higher concentrations than LONGZ or COMPLEX I, even in complex terrain.

Evaluation of the effect of model parameters on the results indicated that stack height was a key parameter. Consequently, the Agency found that the dispersion factor (maximum long-term exposure concentration per unit rate of emission) varies with stack height. By modeling a number of facilities having various stack heights, the Agency was able to generate a correlation between dispersion factor and stack height. Although the stack diameter and gas velocity also varied among these facilities, these parameters were not important and had little effect on the correlation. Other parameters were held constant and were applied to all facilities: wind characteristics of Atlanta, Georgia (which had the worst combination of parameters in any U.S. city examined); flat terrain; gas temperature (38 degrees Celsius); building height (5.5 meters); and building effective diameter (39.5 meters) (Reference No. 45). The results of this analysis were presented in Table 9 of the proposal, which correlated stack heights to national dispersion factors for use in establishing numerical pollutant limits for sewage sludge incinerators (except in the case where stack height exceeded 65 meters, the proposal would have required use of a "good engineering practice" height to correlate to a dispersion factor in Table 9).

The metals emission control efficiencies assumed in assessing the exposure to the MEI corresponded to the worst 10 percent of EPA's data on sewage sludge incinerators. These control efficiencies were as follows: arsenic, 96 percent; beryllium, 99 percent; cadmium, 65 percent; chromium, 96 percent; lead, 67 percent; mercury, 0 percent; and nickel, 95 percent. Control efficiencies were not assumed for organic compounds. Instead, total hydrocarbons were used to control organic emissions.

The Agency proposed a THC operational standard of 20 ppm as one of several options it was considering for regulating sewage sludge incinerators in the November 9, 1990, notice of the NSSS. At the time, the Agency concluded that the 20 ppm THC option was acceptable for sewage sludge incinerators because it was consistent with the 20 ppm THC standard used for hazardous waste incinerators and was within the operating range for incinerators tested by the Agency. Because the Agency had only tested 9 sewage sludge incinerators and was basing its THC standard for sludge incinerators on incinerators designed to fire hazardous waste, EPA requested comment on what level the operational standard for THC should be set (i.e., 10 ppm, 20 ppm, 30 ppm, etc.).

Comments: The Agency received numerous comments on the exposure assessment approach used to establish numerical pollutant limitations for sewage sludge incinerators. Many commenters argued that EPA lacked adequate data on the scientific basis for establishing metals emission control efficiencies for sewage sludge incinerators. Commenters further stated that selecting the worst 10 percent (10th-percentile) from such limited data lacked adequate justification and was an arbitrary decision on the Agency's part. In addition, many commenters were critical of EPA's table of national air dispersion factors. The commenters cited the Agency's use of an outdated ISCLT model and inappropriate or overconservative modeling assumptions as the major problems with the analysis used to develop the dispersion factors. Several commenters felt that the table of dispersion factors was unnecessary and that the Agency should require site-specific modeling using Clean Air Act procedures to determine the air dispersion factor for a sewage sludge incinerator.

Several commenters (including the Agency's Science Advisory Board and other scientific review) took issue with the methodology used to establish THC limitations contending that too many scientific uncertainties exist in the calculation of a single weighted carcinogenic potency value representing the risk of organic compounds emitted from sewage sludge incinerators. Other commenters opposed certain other aspects of the Agency's proposed method for calculating hydrocarbon limitations, including assigning a detection limit of 0.1 $\mu g/m^3$ for both carcinogens and threshold compounds not detected in any of the incinerators tested by EPA but included in EPA's IRIS data base. Many commenters pointed out that the correlation between THC readings and the total concentration of detected organics in the four incinerators EPA tested was poor and that EPA should conduct more testing before it tries to calculate a risk for total hydrocarbon emissions.

Commenters supported a single operational standard for THC emitted from sewage sludge incinerators but questioned EPA's proposed 20 ppm THC standard as being unrealistically low and outside the normal operating range for existing sludge incinerators.

Response: The Agency has concluded that it is infeasible to establish a risk-based numerical pollutant limits for THC emissions from sewage sludge incinerators and that it should adopt an operational standard for total hydrocarbon emissions. The uncertainties identified by the Agency's SAB and commenters have convinced the Agency that site-specific, risk-related THC emission limits cannot be technically supported.

In addition, with respect to metal control limits, the Agency agrees that adequate data on sewage sludge incinerators are not available to establish national metals emission control efficiencies, and that its simplified air model (an outdated ISCLT model) and assumptions were not adequate to develop national air dispersion factors for sewage sludge incinerators. Control efficiency refers to the effectiveness of an incinerator and its air pollution control system in preventing the release of metals to the atmosphere. The air dispersion factor relates the maximum allowable emission rate of a pollutant from a sewage sludge incinerator stack to a maximum allowable increase in the ground level ambient air concentration for that pollutant at a specific distance from the incinerator. The air dispersion factor and the combined metal control efficiencies of the incinerator and the air

pollution control system are key variables in calculating safe numerical limits for pollutants in sewage sludge destined for incineration.

In the part 503 proposal, the Agency established metals emission control efficiencies and air dispersion factors to provide owners and operators of sewage sludge incinerators greater flexibility in complying with the regulations. Under the proposal, owners and operators had the option of (1) site-specific testing to determine the metal emission control efficiency and the air dispersion factor for the incinerator or (2) using the control efficiency and dispersion factor established by the Agency to calculate the maximum allowable concentrations of pollutants in the sewage sludge to be incinerated.

Further, the Agency agrees with many of the comments provided by the public and the scientific peer review committees concerning the limitations of its approach for establishing site-specific THC limitations for sewage sludge incinerators, and that an operational standard(s) for THC is more appropriate given data and scientific limitations. In the part 503 proposal, the Agency proposed to establish site-specific numerical limitations for THCs and required continuous monitoring of THC as a technique for controlling toxic organic emissions from sewage sludge incinerators. Total hydrocarbons were used as a surrogate for organic pollutants emitted from sewage sludge incinerators. The Agency proposed limiting the concentration of total hydrocarbons in the emissions in lieu of specifying the concentration of organic pollutants in sewage sludge that may be fed into the incinerator. The Agency performed air quality modeling to determine the emission rates for organic pollutants (as measured by THC) and inorganic pollutants that can be allowed without imposing undue risks to the most exposed individual in the vicinity of the incinerator. As discussed above, for organic pollutants the allowable emission rate determined by modeling is the numerical limit for THC emissions from sewage sludge incinerators. This is not the case for inorganic pollutants or metals, where the allowable emission rate was used to derive a safe inorganic pollutant concentration in the sewage sludge on a pollutant-by-pollutant basis.

EPA had originally considered controlling the concentration of organic pollutants fed into an incinerator on a pollutant-by-pollutant basis, similar to the approach proposed for metals. However, the approach was not feasible for organic pollutants because the Agency could not establish a destruction and removal efficiency (DRE) for sewage sludge incinerators. DREs of an incinerator are needed to relate the emission of an organic pollutant to its risk-specific concentration and to an allowable safe concentration of organic pollutant in the sewage sludge to be incinerated.

EPA proposed to limit the concentration of total hydrocarbons in the emissions of sewage sludge incinerators for two reasons. First, the approach controls the emission of individual organic compounds found in sludge fed into the incinerator; and second, the approach controls the emission of organic compounds that are created during the combustion process (i.e., products of incomplete combustion, PICs). The Agency recognized setting limitations on total hydrocarbons was an innovative approach that might stimulate considerable scientific debate as to its use in the proposed rule and to its applicability to other Agency incinerator programs.

Final Action: The Agency agrees with many of the findings and recommendations made during scientific review of the proposal and public comment period. As a result, the Agency has used an updated ISCLT model for exposure evaluations for the four carcinogenic metals and lead, and has revised its approach for determining air dispersion factors, control efficiencies for inorganic pollutants (i.e., metals) and its THC approach for controlling organic pollutant emissions from sewage sludge incinerators. The Agency has not established air dispersion factors and metal control efficiencies for sewage sludge incinerators because it currently lacks adequate data to establish dispersion factors and control efficiencies on a national basis. However, in the final rule the Agency has required owners and operators of sewage sludge incinerators to conduct site-specific modeling and performance tests of their facilities to calculate the air dispersion factor and the control efficiency with which the incinerators and air pollution control systems control the emissions of one or more of the pollutants listed in the final rule. The Agency has determined that the updated ISCLT model is the preferred air dispersion model for evaluating pollutants of concern for the final rule, and that the dispersion factor modeling and emission control tests are to be conducted using models and procedures specified by the permitting authority with jurisdiction over the incinerator.

In addition, the Agency has replaced its proposed THC approach with an operational standard similar (but not identical) to the technology-based Tier II approach being used by the Agency for hazardous waste combustion systems [40 CFR Parts 260, 261, 264 and 270, Standards for Emission Monitoring for Owners and Operators of Hazardous Waste Incinerators; and 40 CFR Part 260, Burning of Hazardous Wastes in Boilers and Industrial Furnaces (Reference Nos. 104 & 95)].

The CWA specifically authorizes alternatives to establishing numerical limitations for pollutants in sewage sludge in certain circumstances. Section 405(d)(3) of the CWA states:

> Alternative standards—For purposes of this subsection, if, in the judgment of the Administrator, it is not feasible to prescribe or enforce a numerical limitation for a pollutant identified under paragraph (2), the Administrator may instead promulgate a design, equipment, management practice, or operational standard, or combination thereof, which in the Administrator's judgment is adequate to protect public health and the environment from any reasonably anticipated adverse effect of such pollutant.

Congress recognized that circumstances would arise where it would *not* be feasible for EPA to prescribe numerical limits for pollutants in sewage sludge for certain sewage sludge use and disposal practices. Since a scientifically defensible methodology currently does not exist that can accurately link the concentration of organic pollutants in sewage sludge to organic pollutants emitted from the stack of a sewage sludge incinerator, EPA has concluded that establishing "site-specific" organic pollutant limits for sewage sludge incinerators is just such a case. Thus, for the final rule, the Agency has established a national operational standard for THC emissions of 100 ppm (measured as a monthly average) to ensure that good operating practices at sewage sludge incinerators achieve an adequate level of public health and environmental protection. EPA has selected a regulatory limit of 100 ppm THC (measured on a monthly average—corrected to 7 percent oxygen) for sewage sludge incinerators because: (1) it is within the range of values reported in our data base for incinerators burning sewage sludge; (2) the monthly average excursion policy ensures good operating practice at sludge incinerators on a continuous basis; and (3) the aggregate risk assessment for this practice showed low "baseline" risk to the HEI and the population as a whole.

The final part 503 approach requires owners and operators of sewage sludge incinerators to monitor continuously to ensure that the THC level does not

exceed a good operating practice-based THC limit (i.e., an operational standard for THC emissions) of 100 ppm THC. As discussed later, continuous THC monitoring is required using a flame ionization detection (FID) system over the life of the permit.

EPA has adopted an operational standard of 100 ppm for all sewage sludge incinerators because it concluded that all POTWs should achieve this emission level. Data in the record clearly establish that fluidized bed incinerator will have no difficulty in complying with this standard and that most multiple hearth units can also comply. In the case of some multiple hearth incinerators, POTWs will need to implement process and "good engineering practice" controls to meet the prescribed limits. Requiring compliance with the 100 ppm standard will require some reduction from current levels of sewage sludge incinerator emissions but the Agency cannot estimate how such changes from current practice might reduce human exposure.

The aggregate risk assessment shows that, in the case of organic emissions, current emissions represented a risk of 0.2 (based on "best estimate" emission levels) to 4 cancer case (based on 99th-percentile "worst case" emission levels) annually and a risk to a HEI of 4×10^{-4} to 7×10^{-3}. EPA concluded that any reduction in risk associated with reducing THC emissions below 100 ppm could not be justified in terms of increased protection of public health and the environment. EPA based this conclusion on the fact that the risk assessment for incinerator included very conservative assumptions. These assumptions yielded results that the Agency has concluded probably overstate the risk associated with current levels of sewage sludge incinerator organic emissions.

The risk assessment numbers are based on estimations of organic emissions from sewage sludge incinerators. In order to develop these estimations, a number of very conservative assumptions were made for both the best estimate and worst case scenarios, that probably results in overstating THC emissions for purposes of this analysis. These include assuming that *all* organic compounds that were sampled and analyzed for at seven sewage sludge incinerators—the organic compounds included in the Agency's risk assessment data base, IRIS—are present in the organic emissions of 172 POTW incinerators. In fact, the data establish that many of these compounds (including aldrin/dieldrin and hexachlorobenzene) were not detected at all in the samples. Fifty one percent of the calculated aggregate risk is based on risk associated with three compounds, not found in the sewage sludge samples and that will not be created in the process of combustion. Furthermore, organic compounds not detected in the sampling at concentrations below the detection limits were assigned emission levels that corresponded to the detection limit concentrations. This overstates THC emissions because the true level is below the detection limit and may be significantly lower or non-existent. Moreover, organic compounds that were not detected in the samples were still assumed to be emitted by an incinerator. The emission level assigned for these compounds is either the detection limit value or average values based on detection limits for other compounds. Again, this represents an assumption that results in overstatement of the level of risk.

After calculating risk associated with sewage sludge incinerator emission for THC using the assumptions discussed above, for its "worst-case" scenario, the aggregate assessment increased these estimates by a factor of 5 to account for organic emissions from the stack that have not been identified or quantified. This was done on the assumption that there are unidentified and unquantified organic emissions from sludge incinerators. EPA, in its recent report to Congress on municipal waste combustion concluded that a significant portion of organics emissions (80 percent or more) have not been identified and quantified. However, the report went on to explain that the portion of the mixture that is carcinogenic and its potency is not known. (The Municipal Waste Combustion Study Report to Congress (U.S. EPA 1987a).) Consequently, increasing the risk calculations by a factor of five overstates risk to the extent that the unaccounted for and unquantified portion of the emissions' stream does not include carcinogenic organics.

In light of this and the fact that over half the calculated risk is associated with compounds not detected in sewage sludge, EPA determined that there is no basis for limiting emissions to a level below 100 ppm. As previously explained, EPA considered requiring sewage sludge incinerators to achieve a 20 ppm emission level. However, the Agency had not considered how much variability (i.e., excursions above the THC standard) it would allow in measuring THC emissions from sewage sludge incinerators for purposes of compliance. Obviously, requiring a 20 ppm THC operational standard on a quarterly or yearly basis is significantly different from enforcing the same standard on a daily or monthly basis. For example, if the Agency used a yearly average as its excursion policy for enforcing the 20 ppm THC standard, emissions from sewage sludge incinerators could be significantly above the THC standard for periods up to six months.

However, the Agency has decided to adopt a monthly averaging period for the purpose of determining compliance. If the Agency enforced the 20 ppm THC standard on a monthly basis, such a policy would be over protective given the "baseline" aggregate risks associated with sewage sludge incinerators, and many sludge incinerators would be out of compliance (even though 20 ppm is within their operating range) because they are unable to consistently achieve that level of operation on a monthly basis. Data reviewed by the Agency established that many sewage sludge incinerators have greater variability in their THC emissions than do other waste incinerators because sewage sludge, in general, has a high moisture content and that moisture content can vary widely during operation.

Other Risk Management Issues, Comments, Responses and Final Action

A number of comments were received from commenters that are specific to various risk management aspects of the part 503 regulations. A synopsis of the major comments and the Agency's responses and final actions is given here. More comments and responses on these and other topics may be found in the Response to Comments Document for the Proposed part 503 rule (Reference No. 109). Information on obtaining single copies of this document is provided in part XIV of the preamble.

Domestic Septage

Comments on the Proposed Approach

The Agency received over 130 comments concerning the proposed treatment of septage. A majority of the commenters opposed the regulation of septage as sewage sludge. Commenters indicated the proposed regulations were too costly to implement and would have a negative effect on the environment. The commenters maintained that the regulations, if adopted as proposed, could eliminate the land application of septage or could cause illegal or reduced pumping of septage systems by homeowners or illegal dumping.

Many comments were received from small communities and septage pumpers and haulers disagreeing with

the Agency's proposed approach. They argued that applying the proposed regulations for sewage sludge from POTWs to domestic septage collected from private homes was over stringent, burdensome, and would have little or no environmental benefit. They were particularly concerned about the proposed requirements for pathogen and vector attraction reduction, and the frequency of monitoring pollutants, recordkeeping and reporting.

Response to Comments

The Agency, after reviewing the public comments, agrees that the regulations as proposed, if applied to septage, would have been exceedingly difficult to implement and therefore, unlikely to achieve the public health and environmental statutory objectives. The proposed part 503 rule regulated septage that is pumped and collected for use or disposal (septic tank pumpings) in the same manner as municipal wastewater sewage sludge. Even though a comprehensive national data base on septage quality did not exist at the time of the proposal, EPA believed that septage, like sewage sludge, had the potential to adversely impact public health and the environment because septage was suspected of having very similar properties to sewage sludge and containing the same types of pollutants and pathogenic organisms. Moreover, the legislative history of section 405 evidences Congressional intent that EPA's regulations should address domestic septage as well as sewage sludge. S. Rep. No. 50, 99th Cong., 1st Sess., p. 47 (1985). It was for these reasons that EPA decided to regulate septage in the part 503 proposal.

Under the proposed approach, the same numerical pollutant limits and management practices applicable to sewage sludge would have also applied to septage. In addition, septage would have been required to be analyzed to determine the amount and presence of inorganic and organic pollutants covered by the regulations. This information was required to allow the septage pumper or hauler to determine the appropriate use or disposal practice. If, as is generally the case, septage is to be applied to agricultural or non-agricultural land, pollutant concentration data would be needed to determine the allowable pollutant application rate or maximum pollutant concentrations for applying the septage to the land. EPA believed that concentrations of inorganic and organic pollutants in septage would be lower than concentrations of these pollutants in sewage sludge because of the septage's predominately domestic sewage nature and the lack of significant industrial wastewater contribution to it. Because septage quality should be better than sewage sludge quality, the Agency believed that it would prove easier for septage than for sewage sludge to comply with the requirements of the part 503 proposal.

Because of the comments and information EPA received on the proposal, the Agency evaluated alternative regulatory strategies that would similarly protect public health and the environment but are less complex and easier to implement. One such strategy was put forth in the 1990 notice of the NSSS (55 FR 47240–47242, November 9, 1990). This approach replaced pollutant monitoring and cumulative pollutant loading limits used for sewage sludge with a single hydraulic loading rate (30,000 gallons per acre per year) for septage applied to the land. In addition, the approach used short term lime stabilization to control pathogens and vector attraction, and other requirements such as crop, use and access restrictions to ensure adequate protection of public health and the environment. This approach received many favorable comments from reviewers.

The Agency recognized, as a result of comments on the proposal and 1990 notice, that several factors must be taken into account when regulating septage. Most septage collection businesses are small operations, usually three or fewer trucks. Each truck generally has a storage capacity of about 2,000 gallons which will contain the wastewater from, at most, two typical home septic tanks. Under these circumstances, it is readily apparent how difficult it would be to require sampling and testing of septage for organics, metals and nitrogen, and then regulate land application based on septage quality. Such an approach appears particularly onerous for small and marginal businesses in the septage service industry.

While the Agency believes domestic septage has many of the same chemical and biological constituents as sewage sludge and septage requirements must protect public health and the environment to the same degree as sewage sludge requirements, it has also concluded that septage presents less of a risk to public health and the environment than sludge may because these constituents are found at very low concentrations. Presently, a number of States and local governments regulate land application of septage by controlling the amount of septage that may be applied on a gallons per acre per year basis—a hydraulic loading rate approach similar to the approach considered in the 1990 notice.

The Agency believes the use of a hydraulic loading rate is an attractive alternative for small volumes of septage with low levels of pollutants. Such a regulatory approach is easily understood and implemented by small communities and septage pumpers and haulers. Moreover, it does not require specific testing of septage loads and land application based on the analysis of septage quality. This approach also lends itself to a simple recordkeeping system. Regulatory agencies would merely check the haulers' records which would indicate the gallons of septage hauled to a specific site.

To validate the hydraulic loading rate approach for the final rule, the Agency, using data on domestic septage quality, compared calculated reasonable hydraulic loading rates for septage to the risk-based pollutant loading rates for sewage sludge. The first step was to calculate reasonable hydraulic loading rates based on the nitrogen requirements of various crops and vegetation expected to be grown on land application sites. Based on the available nitrogen content from domestic septage and varying the crop uptake rate in pounds of nitrogen per acre per year, a range of annual septage application rates were calculated as a function of crop nitrogen requirements. Determining the annual septage application rate based on nitrogen uptake was considered reasonable because it provides only the amount of nitrogen needed to satisfy the growth requirements of crops and vegetation grown on the land application site.

To verify that hydraulic loading rates for domestic septage protect public health and the environment, the Agency reviewed the pollutant content of domestic septage from data gathered during the public comment period (Reference number 107). Using this information, the Agency calculated the cumulative pollutant loads for each pollutant in domestic septage and compared them to the risk-based cumulative pollutant loads developed for the land application of sewage sludge in the final part 503 rule. Based on this analysis the Agency concluded that a hydraulic loading rate approach for septage applied to land would provide a similar level of public health and environmental protection as cumulative pollutant loading limits provide for sewage sludge.

The Agency also evaluated the adequacy of site restrictions and pH controls as a means of protecting public health and the environment from pathogens found in and vector attraction

to domestic septage. Domestic septage contains pathogens and is capable of attracting vectors when untreated septage is applied to the land surface. Based on a university study (Ronner, A.B., Cliver, D.O. 1987. "Disinfection of Viruses in Septic Tank and Holding Tank Waste by Calcium Hydroxide." University of Wisconsin, Madison) and on several States' experience with lime stabilized septage, the Agency found that raising the pH of septage with an alkaline material to 12 or above for 30 minutes stabilizes domestic septage and equals the minimum pathogen reduction requirements for a Class B sewage sludge described in the part 503 proposal. In addition, the Agency found that (based on States' experience) the vector attraction reduction requirement for septage is also satisfied by pH control because odors are drastically reduced.

Site use and access restrictions were also evaluated as a way of protecting public health and the environment when pH control was not used to reduce pathogens and vector attraction to land applied septage. The Agency determined that use and access restrictions were an appropriate means of protecting public health and the environment in the absence of pH control by ensuring that exposure to untreated septage is minimized. Thus, for the final rule, the Agency concluded that either pH control or use and access restrictions would provide an adequate level of public health and environmental protection from land applying domestic septage.

In addition to the above changes, the Agency simplified many of the monitoring, recordkeeping, and reporting requirements for domestic septage. EPA believes that these changes result in domestic septage requirements for the final part 503 rule that are more implementable than the requirements in the proposal, and that protect public health and the environment from reasonably anticipated adverse effects of pollutants found in domestic septage.

Final Action

As a result of public comments, the Agency has revised its approach for regulating domestic septage applied to land or surface disposed for inclusion in the final part 503 rule. It is the Agency's conclusion that the revised approach will be less burdensome and still protect public health and the environment. The requirements in today's final rule apply only to *domestic* septage as defined and not to sewage sludge. These requirements also do not apply to domestic septage that is co-mingled with industrial or commercial wastewaters, sludges or greases. A description of the requirements for the final part 503 rule is provided below:

1. *Domestic septage land application rate limit.* The rate of septage applied to land would be limited to an annual septage application rate (gallons per acre per year—hydraulic loading rate) depending on the crops or vegetation grown on the land application site. The Agency has determined that limiting the hydraulic loading of septage, based on the nitrogen requirements of crops and vegetation, will adequately protect public health and the environment. This approach, based on the data on pollutant concentrations in septage reviewed by the Agency, ensures that the application of septage will not result in exceeding the cumulative pollutant loadings for metals that the Agency has found to be protective. In addition, septage applied at the appropriate hydraulic loading rate will satisfy nitrogen demands for growing crops without adversely affecting surface or ground water because available inorganic nitrogen will be taken up by the crops and organic nitrogen will be released too slowly (over a period of years) to cause contamination of surface or ground waters.

In contrast to land application, when domestic septage is disposed of on a surface disposal site, the final rule does not limit the application of septage by a hydraulic loading rate. Based on its review of data on metal concentrations in septage, the Agency has determined that a loading limitation is not required to protect public health and the environment. Metal concentrations in septage are well below safe numerical pollutant limits for sewage sludge when disposed at a surface disposal site. Moreover, the volume of domestic septage being disposed is small in comparison to sewage sludge.

2. *Pathogen and vector attraction reduction.* Short term alkaline stabilization (pH adjustment) is required to reduce pathogens and vector attraction prior to land application of septage. Short term stabilization with lime or equivalent alkaline products would be accomplished by raising the pH of septage to 12 or greater for 30 minutes. When domestic septage is disposed of at a surface disposal site, alkaline stabilization is required if the surface disposal site does not inject or incorporate the septage into the soil, or cover the septage by the end of the operating day. These requirements are similar (but not identical) to the pathogen and vector attraction reduction Criteria for Classification of Solid Waste Disposal Facilities (40 CFR part 257). The Agency has concluded that raising the pH of domestic septage reduces pathogens, indicator organisms and vector attraction and thereby decreases the risk of disease to the public. In cases where alkaline stabilization is not possible, restrictions on crops, use and access are required to protect public health and the environment.

3. *Crop restrictions.* When alkaline stabilization is not possible and domestic septage is applied to agricultural land, the planting of crops whose edible portions may contact the surface soil and of root crops grown in the soil would be prohibited after septage application for 14 and 38 months, respectively. The Agency has found that short term alkaline stabilization does not sterilize the septage but does significantly reduce the number of pathogens and indicator organisms. The 14 and 38 month planting delay would allow further die-off of these organisms from exposure to sunlight and frequent drying to levels the Agency believes is protective of public health.

4. *Use and access restrictions.* When alkaline stabilization is not possible, access to sites where the potential for public exposure is high (e.g., parks and recreational areas) is restricted for 12 months after application of domestic septage to those sites. This is the same period in the current Criteria for Classification of Solid Waste Disposal Facilities (40 CFR part 257) for septage that is applied to the land if the septage is not treated in a Process to Significantly Reduce Pathogens. The main purpose of the 12 month restriction is to protect children who may ingest septage-amended soil while playing in the areas where domestic septage is applied. The Agency believes that the 12 month period is reasonable based on pathogen die-off information for septage-amended soil. For agricultural and non-agricultural lands (i.e., forest and reclamation sites) where the potential for exposure to the septage-soil mixture is low, public access would be restricted for 30 days. In addition, animals will not be allowed to graze or feed crops harvested for a period of 30 days after the application of septage. EPA concluded that the use of different time periods for access restrictions is appropriate because those time periods reflect the potential for different exposures. The Agency also believes, based on available information, that the different time periods help protect the public from the effects of pathogens in domestic septage.

Site-Specificity for Use and Disposal Practices

Comments on the Proposed Approach

Many commenters maintained that the part 503 rule should provide greater flexibility in establishing numerical pollutant limitations and management practices for sewage sludge use and disposal by allowing for variances based on site, state or regional specific factors. The commenters argued that since site-specificity is currently a basis for EPA's National Pollutant Discharge Elimination System (NPDES) permitting program under the Clean Water Act and the part 503 regulations are an extension of this program, the same type of site-specific evaluation should be allowed for sewage sludge use and disposal. Treatment works or individuals using or disposing of sewage sludge would then have the option of complying with the national standards, or requesting a variance or waiver based on meeting state design standards or site-specific conditions. The commenters believed that this approach would increase the beneficial reuse of sewage sludge but recognized it would also increase the burden on the permitting authority. One commenter suggested that EPA allow site-specific soil testing for metals once cumulative inorganic pollutant limitations are reached in order to determine if the site-life for agricultural land practices is actually exhausted. Another commenter felt that the monofill model should be modified, on a case-by-case basis, to remove that quantity of pollutant taken up by plants and animals on the site from the quantity of pollutants available for leaching to the ground water.

Response to Comments

The Agency agrees that the part 503 regulations, to the extent feasible, given limited Agency resources, should provide the flexibility to modify the standards in appropriate circumstances. In the part 503 rule, the Agency used pollutant fate and transport models in 14 exposure assessment pathways to predict the long-term human health and environmental effects of using or disposing of sewage sludge by the practices covered in the regulations. Sensitivity analyses were performed on the models to identify those factors that were most significant in determining the model results. In conducting the sensitivity analyses for the proposal, the Agency found for certain disposal practices that varying certain parameters made a significant difference in a numerical limit for a pollutant, without causing the pollutant to exceed the human health or environmental endpoint from which the limit is calculated. However, the Agency did not find any physical parameters in the land application model made a significant difference in the pollutant limits.

For the proposal, the Agency also considered developing a "tiered" regulatory approach for treatment works that could not meet the national numerical limits and did not want to conduct site-specific exposure assessment modeling for all the parameters in the 14 exposure pathways. Such an approach would establish intermediate numerical limits based on varying a few pathways and parameters at each tier. Treatment works would submit for the appropriate tier their site-specific numerical limits, exposure pathway assessment and supporting data to the permitting authority, and the permitting authority would review and approve the data, exposure assessment and site-specific limits.

One reason the Agency rejected the "tiered" regulatory approach was its complexity. Such an approach would be inconsistent with the Agency's principle of developing a rule that could be implemented easily (i.e., a self-implementing rule). It would be impossible to include in the rule all possible variations occuring at a site. Another reason for rejecting the approach was that the Agency did not believe that treatment works would use the intermediate tiers. Rather than varying only a single parameter, the Agency felt it more likely that a treatment works would collect data on as many parameters as possible to determine if, by doing so, their sludge could meet recalculated numerical limits for their site. This would further complicate implementation of the rule, increase the burden on the permitting authority and the treatment works, and based on the Agency's analysis for the proposal, provide no significant difference in the pollutant limits for land application practices.

For the final part 503 rule, the Agency reexamined whether or not to allow site-specific pollutant limits for land application practices beneficially using sewage sludge as a fertilizer or soil amendment. As discussed above, EPA evaluated 14 exposure assessment pathways to establish national numerical pollutant limits for practices that beneficially land apply sewage sludge. The Agency considered allowing a treatment works the flexibility to conduct site-specific exposure assessments and recalculate pollutant limits for each land application site using the 14 exposure pathways evaluated in the final rule, but decided not to allow the site-specific option for land application practices for several reasons.

First, site-specific pollutant limits would have to be developed on a site-by-site basis for possibly thousands of land application sites. Given the complexity of the 14 exposure pathways and the amount of data needed to field validate and verify each exposure assessment, the Agency determined that it would not be economically practical for a treatment works to conduct as many as 14 exposure pathway assessments for each land application site. In addition, the Agency believes that the administrative burden on permitting authorities to review and approve site-specific numerical limits on a case-by-case basis for thousands of land application sites would not be feasible and is beyond the self-implementing nature of today's final rule.

Second, many of the parameters in the 14 exposure pathways are based on Agency risk policy decisions (e.g., an RfD for an inorganic pollutant). EPA does not believe that values for these parameters should be changed regardless of site-specific conditions and that any variation in these pathways or parameters could result in numerical pollutant limits that are not adequate to protect public health and the environment. Finally, if the Agency restricts which pathways and parameters can be used or varied in a site-specific exposure assessment to those that are not critical from an EPA risk policy standpoint, the Agency does not believe that the numerical limits recalculated from such a "limited" exposure assessment would result in less stringent cumulative pollutant loading rates. Therefore, conducting or evaluating a site-specific exposure assessment based on varying only a few parameters in a few pathways would not be a prudent use of limited resources since it would not make a significant difference in the numerical limits for the site.

In support of site-specific soil testing for land application practices, it is possible that inorganic pollutant concentrations measured in the soil may be less than the allowable pollutant concentrations from the exposure pathway assessment after the cumulative inorganic pollutant loading limits are reached because of losses due to leaching and plant uptake. However, EPA believes that these losses would be small and would not significantly increase site-life beyond pathway predicted values. Further, any small anticipated increase in site-life would

not justify the administrative burden of conducting and evaluating site-specific soil tests and exposure assessments. For the above reasons, the final part 503 regulations do not allow site-specific soil testing for land on which sewage sludge is applied.

The Agency also considered for the final rule whether to allow site-specific pollutant limits for surface disposal practices including sludge-only landfills. Because the part 503 surface disposal limits are based only on the results of the vapor and ground water pathways, EPA determined that site-specific pollutant limits are feasible for all surface disposal practices. However, the Agency does not believe it is feasible, on a site-specific basis or otherwise, to modify Pathway 13 (surface disposal vapor pathway) or Pathway 14 (surface disposal ground water pathway) to account for the amount of a pollutant that may be taken up by animals or vegetation on the site from the quantity of pollutant available for vaporizing to air or leaching to ground water. The Agency believes that such losses would be insignificant, if quantified, having little effect on site-specific numerical pollutant limits for those pathways.

As discussed earlier, the Agency also evaluated the potential risks to wildlife from surface disposal practices and found that wildlife exposure was not significant enough to develop numerical limits using the wildlife exposure pathways for these practices. Because of the physical nature of these sites, active surface disposal sites do not provide a suitable habitat for many plant or animal species. This is supported by current evidence that does not indicate significant levels of foraging or other biological activities that would lead to significant exposure for these practices. For these reasons, the final part 503 regulation allows site-specific pollutants limits for surface disposal practices but does not allow the exposure pathways to be modified to reduce the amount of pollutants vaporizing to air or leaching to ground water after accounting for pollutant uptake by plants and animals on the site.

Final Action

In today's rule, the option of recalculating numerical pollutant limits based on certain site-specific conditions would be available for treatment works that dispose of their sewage sludge in surface disposal sites (including monofills) on a case-by-case basis.

The final rule balances the flexibility associated with site-specific analyses against the simplicity of national numerical limits. A rule that allows exceptions for every conceivable contingency would prove difficult to understand. Moreover, implementation of such a rule would require an unwarranted commitment of the Agency's limited resources. Therefore, exceptions to national pollutant limits are based on certain site-specific conditions that would make a significant difference in the pollutant limits but not their protectiveness.

Although the Agency's preference is for treatment works to use sewage sludge for its beneficial properties, EPA's responsibility is to set standards, for each practice, that are adequate to protect public health and the environment. Section 405(e) of the CWA requires treatment works generating or treating sewage sludge, as well as persons using or disposing of sewage sludge, to comply with the technical standards. Realistically, the Agency cannot issue permits to every user of sewage sludge. Therefore, the site-specific option is not allowed for land application practices and primary responsibility is placed on treatment works for ensuring that sewage sludge meets the requirements of the rule.

The approach that the Agency is promulgating in the final rule utilizes a combination of national numerical limits and case-by-case site-specific exposure modeling for surface disposal practices. Under certain conditions the treatment works would calculate new numerical limits based on the physical and environmental conditions at the surface disposal site. The treatment works will not have to collect data on all model parameters at the site. To ensure that site-specific limits are protective of public health and the environment, the Agency will not allow the treatment works to vary long-established Agency human health or environmental criteria such as RfDs, RfCs, MCLs, etc., or other parameters that would reduce the level of protectiveness in the site-specific limit. The conditions, exposure pathway models and site-specific parameters (e.g., depth to ground water, soil type and permeability, etc.) for which a treatment works may submit site-specific data and exposure pathway assessments will be provided in supplemental guidance issued by EPA shortly after promulgation of the final part 503 rule.

Application of Sewage Sludge to Frozen or Snow-Covered Land

Comments on the Proposed Approach

Many commenters objected to EPA restricting the application of sewage sludge to frozen or snow-covered land. The commenters maintained that sewage sludge could be applied to frozen or snow-covered land in an environmentally sound manner if certain precautions were taken at the site, such as considering slope, separation distance, soil type, conservation practice, and hydraulic loading.

Response to Comments

The Agency agrees that good management practices, such as vegetative cover and run-off containment can control pollutant migration from frozen or snow-covered lands where sewage sludge is applied. In the part 503 proposal, the Agency proposed to prohibit the application of sewage sludge to frozen, snow-covered, or flooded land unless the applier could demonstrate that the sewage sludge could be applied in a manner that will not cause a discharge of pollutants into waters or wetlands in violation of any requirements set forth by the Clean Water Act. The Agency believes that sewage sludge applied to frozen, snow-covered, or flooded lands could readily be transported off the site with the first melt or rainfall into a river, stream, lake, or wetland. These uncontrolled releases could result in adverse impacts to sensitive environmental areas such as spawning habitats located in wetlands. In addition, 26 States already impose similar restrictions on the land application of sewage sludge to prevent such environmental abuse.

Final Action

The final part 503 rule prohibits the application of sewage sludge to frozen or snow-covered land if the sewage sludge will cause a discharge of pollutants into waters or wetlands in violation of Clean Water Act requirements. This requirement does not apply to sewage sludge or sewage sludge products that are sold or given away for use in home gardens. In addition, bulk sewage sludge and bulk products containing sewage sludge may not be applied to flooded land. Shortly after promulgation, the Agency will issue separate guidance explaining how appliers can demonstrate compliance with this and other Clean Water Act requirements.

Set-Back Requirements

Comments on the Proposed Approach

Several commenters requested the Agency to include in the final part 503 regulations additional set-back requirements for distances from sewage sludge land application sites to ground water, bedrock, residences, property

lines, drinking wells and surface water bodies. One commenter stated that these set-back requirements should depend on site-specific conditions, such as soil type, pH, and slope, while limiting applications during adverse conditions. Other commenters suggested set-back distances between land application sites and private and public wells of 200 and 1000 feet, respectively. One commenter felt that the 10 meter set-back used in the proposed rule was not sufficient to protect surface waters from pollutants in sewage sludge. Another commenter suggested prohibiting sewage sludge application sites where the depth to ground water is less than one meter.

Response to Comments

The Agency disagrees that the part 503 rule should include additional or more stringent set-back requirements, or prohibit the land application of sewage sludge if the depth to ground water is less than one meter. The numerical limits established by the exposure assessment models are based on "reasonable worst-case" parameters such as one meter depth to ground water and 10-meter set-back from surface water. Under these conservative conditions the Agency believes the numerical limitations are adequate to protect public health and the environment from reasonably anticipated adverse effects of pollutants found in sewage sludge that is land applied. In addition, the Agency has required other management practices and siting restrictions to further protect public health and to prevent environmental abuse.

Anyone using or disposing of sewage sludge is obligated to comply with the requirements set forth in the part 503 rule. Moreover, in the case of surface water, section 405(a) of the CWA already prohibits, except in accordance with an NPDES permit, any disposal of sewage sludge if the disposal would result in any pollutant from the sludge entering navigable waters. However, as provided in section 405(d)(5) and section 510 of the Clean Water Act, States may impose more stringent requirements than those included in the part 503 regulations. In fact, many States and local governments already have zoning and set-back requirements that address many of the concerns raised by the commenters.

Final Action

The Agency has decided to retain the proposed set-back requirements in the final part 503 regulations for all land application practices, and not to expand or increase their stringency. However, the Agency has removed the proposed set-back requirements for sewage sludge and sewage sludge products that are sold or given away (referred to as distribution and marketing in the proposal) in the final part 503 rule because data provided during the public comment period showed that distributed and marketed sludge products do not pose a significant surface water pollution problem from run-off. The Agency believes the numerical limitations derived from the exposure pathway analyses for land application practices, in addition to the set-back, siting and management practice requirements contained in the final rule are adequate to protect public health and the environment. In addition, States are free to impose more stringent requirements if needed, and in many cases already have set-back and zoning laws that address the issues identified in the public comments.

Nitrogen Limitations for Non-Agricultural Land Application

Comments on the Proposed Approach

Many commenters argued that the proposed requirement for the application of sewage sludge to non-agricultural land, which states that the amount of nitrogen applied may not exceed the nutrient needs of the vegetation grown on the site, would prevent the beneficial use of sewage sludge for many of the non-agricultural land practice categories such as forest land, soil reclamation, and other beneficial use practices. The commenters maintained that, since non-agricultural land application encompasses a number of very different practice categories each having a different nitrogen management philosophy, the Agency should revise its agronomic rates requirement.

Response to Comments

The Agency agrees that the agronomic rates requirement may not be consistent with certain beneficial non-agricultural land practices such as land reclamation. As noted, the proposal included a provision that sewage sludge could not be applied at rates in excess of the nitrogen requirements of the vegetation (e.g., trees, grasses, etc.) and at rates that would cause the excess nitrogen in the sewage sludge to leach to the ground water. The objective of such a requirement is to satisfy the removal of the nitrogen requirements for optimal plant growth and to minimize nitrate contamination of ground water.

Sewage sludge contains three to five percent nitrogen. Nitrogen may be in the form of organic nitrogen, nitrogen as ammonia, and nitrogen as nitrate. Organic nitrogen is the predominant form of nitrogen in sewage sludge and decomposes into ammonia and nitrate. Ammonia is the form of nitrogen absorbed by the plant. Ammonia not absorbed by the plant may volatilize or has the potential to oxidize and form nitrate, a water soluble anion that moves readily downward into the soil profile. High levels of nitrate in drinking water supplies may result in health problems for both infants and livestock. The drinking water standard is 10 milligrams of nitrogen as nitrate per liter of water.

The nitrogen requirements of different plants can range from 50 to over 350 kilograms per hectare (45–312 pounds per acre). The nitrogen content of the sewage sludge, cropping patterns, plant-available nitrogen in the soil, supplemental fertilizers used, climatic conditions, and method of sewage sludge application also affect the amount of nitrogen that plants can effectively absorb from the sewage sludge.

Final Action

The Agency has decided to revise the agronomic rates requirement in the final regulations for land application practices. The final part 503 rule allows the application of bulk sewage sludge at rates designed to minimize the amount of nitrogen that passes below the root zone of the crop or vegetation grown on the site to ground water. For land reclamation, the permitting authority may authorize (by permit) a variance from this requirement provided the owner or operator of the site can demonstrate that nitrogen application in excess of crop and vegetative requirements would not contaminate ground or surface water. The Agency recognizes that allowing such a variance may cause a temporary pulse of nitrogen to occur in ground water or surface water near the site. However, the Agency believes that any minor excursion granted by the permitting authority would not be of sufficient duration or magnitude to produce adverse public health or environmental effects. Any slight potential for negative impacts from a temporary nitrogen pulse would be more than offset by the beneficial effects of land reclamation such as decreased acid run-off, erosion control, attenuation of inorganic and organic pollutants, and increased soil nutrient levels.

Rather than establish a national numerical limit for nitrogen for all land application practices, the Agency is requiring that the agronomically appropriate sewage sludge application rate be established by the permitting

authority based on site-specific land management practices. Guidance is available to assist in establishing the appropriate application rate from the "Process Design Manual—Land Application of Municipal Sludge" (Reference number 61) and from County Extension Service agents, State Extension soil fertility specialists, and State and local Soil Conservation Service agents.

Part 503 Vs. Part 258

Comments on the Proposed Approach

Several commenters recommended that, in the part 503, EPA regulate monofills (now regulated with surface disposal practices) in the same way as 40 CFR part 258 regulates MSWLFs in areas such as location criteria, closure requirements, long-term care, monitoring, and financial responsibility. They felt that the proposed part 503 regulations failed to recognize the importance of these areas and of: (1) Proper liner design or other engineering measures necessary to prevent pollutant migration; (2) engineering controls that allow for efficient collection and management of leachate; (3) ground water monitoring to assure that the monofill maintains its integrity; (4) a mechanism for triggering "corrective action" when the integrity of a monofill is compromised; (5) and a financial assurance mechanism to assure that the monofill can be closed properly at the end of its useful life. Some commenters were especially concerned that the proposed part 503 rule only regulated 16 pollutants in sewage sludge while the part 258 regulations addresses monitoring requirements for over 200 constituents. Other commenters maintained that allowing sewage sludge to be co-disposed with municipal solid waste without developing the numerical limitations for the co-disposed sludge did not comply with section 405 of the Clean Water Act.

Response to Comments

The Agency disagrees that, in the part 503 regulations, EPA must regulate surface disposal practices (that now includes sludge-only landfills—monofills) in the same way it has regulated municipal solid waste landfills and include the pollution containment requirements adopted in the part 258 rule in addition to the numerical pollutant concentration limits. The 40 CFR part 258 rule is a pollutant containment rule that specifies minimum Federal criteria for municipal solid waste landfills (including landfills that accept sewage sludge along with municipal solid waste). Among these requirements are location restrictions, facility design and operating criteria, ground water monitoring, and corrective action, closure and post-closure care, along with financial assurance requirements. The part 258 rule regulates municipal solid waste landfills using all these technical considerations.

In contrast to the part 258 rule, the part 503 rule seeks to limit the addition to the environment of pollutants from sewage sludge rather than contain the pollution on site. Thus, part 503 requires a quality of sewage sludge such that there will be no unacceptable impacts from the migration of pollutants. Therefore, conservative risk and exposure models were utilized to establish numerical limitations with an adequate margin of safety for pollutants in sewage sludge so that the resulting pollutant concentrations reaching a highly exposed individual through ground water are below human health criteria (maximum contaminant levels). Ground water monitoring and corrective action would be redundant and are, therefore, not needed for this controlled release approach. This approach depends on accurately characterizing the quality of sewage sludge through monitoring and controlling the sewage sludge quality through programs such as categorical pretreatment standards and local pretreatment programs. States may, of course, impose additional requirements if they desire.

By contrast, provisions of the part 258 regulations for municipal solid waste landfills control sewage sludge that is placed in these facilities through a facility design and management practice approach. The part 503 regulations adopted today for surface disposal sites include numerical pollutant limits that are adequate to protect public health and the environment from any adverse effects from pollutants found in sewage sludge and to control the quality of sewage sludge through these limits for each use and disposal practice. By setting risk-based pollutant limits to control sewage sludge quality, the Agency ensures that public health and the environment are adequately protected for those use and disposal methods regulated in part 503.

For purposes of section 405 of the CWA, in part 503, EPA has adopted the part 258 criteria as the appropriate standard under section 405 for sewage sludge disposed of with municipal waste. EPA concluded that if sewage sludge is disposed of in a MSWLF complying with part 258 criteria, public health and the environment are protected. Although section 405 of the Clean Water Act indicates a preference for numerical pollutant concentration limits to protect public health and the environment, the statute recognizes that development of scientifically defensible pollutant limits may not always be possible for all sewage sludge use and disposal practices. Thus, section 405(d)(3) provides:

> Alternative Standards—For purposes of this subsection if, in the judgment of the Administrator, it is not feasible to prescribe or enforce a numerical limitation for a pollutant identified under paragraph (2), the Administrator may instead promulgate a design, equipment, management practice, or operational standard, or combination thereof, which in the Administrator's judgment is adequate to protect public health and the environment from any reasonably anticipated adverse effects of such pollutants (CWA 405(d)(3)).

In developing the part 258 criteria, the Agency evaluated the technical feasibility of establishing numerical limits for sewage sludge that is co-disposed with solid waste in municipal solid waste landfills. In that rulemaking, EPA determined that it is not technically feasible to establish numerical criteria for sewage sludge being disposed at these facilities since any potential environmental or human health affects clearly be dominated by the solid waste component in the disposal facility. Therefore, EPA adopted, for purposes of co-disposed sludge regulation, the part 258 design and management criteria. Sewage sludge co-disposed with solid waste at landfills meeting the requirements of part 258 will satisfy the statutory directive of the Clean Water Act because the part 258 regulations have been determined to be as protective of public health and the environment as the part 503 regulations. Even though the approaches used in parts 258 and 503 are different, both approaches accomplish their statutory directive to protect public health and the environment.

Final Action

Standards for sewage sludge that is disposed of in a landfill with municipal solid waste are established in 40 CFR part 258. Compliance by treatment works with requirements of 40 CFR part 258 constitutes compliance with section 405. The part 258 standards are jointly promulgated under the authorities of sections 4004 and 4010 of RCRA and section 405(d) of the CWA. To meet these standards, treatment works must ensure that: (1) The sewage sludge sent to MSWLFs is not hazardous, as defined by the regulatory limits in 40 CFR part 261; and (2) the sewage sludge passes the Paint Filter Liquids Test (i.e., it contains no free liquids).

In the preamble to the MSWLF rule, EPA explained its judgment that it is not technically feasible to establish numerical limitations for the pollutants which may be present in sewage sludge that is co-disposed in municipal landfills. 56 FR 50978, 50996–50997 (October 9, 1991). In lieu of such numerical limitations, EPA promulgated an extensive set of rules pertaining to the design, management practices, and engineering standards for MSWLFs which co-dispose sewage sludge. (56 FR 50978–51119, October 9, 1991). As required under CWA section 405(d)(3), EPA determined that these alternative standards were adequate to protect public health and the environment. *Id.*, at 50997.

EPA has provided a sound technical and scientific basis for its CWA section 405(d)(3) determination that numerical limitations could not be set for sludge co-disposed in municipal landfills. In the proposed part 258 rule, EPA made a tentative determination under CWA section 405(d)(3) that it was not feasible to prescribe numerical limitations for pollutants in co-disposed sludge. EPA based this determination on the conclusion that sludge constitutes only a minor portion of all waste that is disposed of in municipal landfills (e.g., 5 percent by volume) and that is not scientifically possible to separate out the fate, transport, and environmental effects of pollutants in sludge from those contaminants contained in the vast amount of other waste disposed of in the landfill. 53 FR 33314, 33320, 33322 (August 20, 1988).

In the final part 258 rule (56 FR 50978, 50996–50997), EPA explained that there were no scientifically adequate mathematical models which could be used to assess the movement of sewage sludge pollutants from disposal facilities which also accept other types of waste, such as municipal landfills. *Id.*, at 50997. EPA determined that, in contrast to disposal situations where sewage sludge is disposed of in a sludge-only facility, there were too many scientific uncertainties concerning the chemical interactions between sludge pollutants and those pollutants contained in garbage and other household waste when all were mixed in a municipal landfill. *Id.*

Given these uncertainties, EPA concluded that no existing model, including the model which had been utilized to propose numerical limitations for sludge pollutants when the sludge is used or disposed of on its own (54 FR 5764–5778 (February 6, 1989)), could track the fate of sludge pollutants in a municipal landfill. As a consequence, the Agency determined that it could not prescribe with any degree of scientific certainty the appropriate numerical limitations for such sludge pollutants in co-disposed situation. *Id.*

Moreover, EPA concluded that there was a significant absence of data on the typical levels of pollutants contained in household waste which is co-disposed with sludge in municipal landfills. *Id.* Without some knowledge about the character of the household waste component in a co-disposal facility and its effect on the potential of toxic pollutants to leach from the landfill, the Agency determined that it was "impossible to calculate limitations for the sludge pollutants." *Id.*

The information EPA considered for part 258 fully supports EPA's determination under CWA section 405(d)(3) that the operational, design, and engineering standards which are incorporated into the MSWLF rule are adequate to protect public health and the environment from any reasonably anticipated adverse effects of toxic pollutants in sewage sludge co-disposed in municipal landfills. 56 FR 50978, 50997 (October 9, 1991).

Ground Water Monitoring and Degradation

Comments on the Proposed Approach

Several commenters maintained that a mechanism to ensure ground water protection was not provided in the part 503 proposal because ground water monitoring provisions were not required for monofills. The commenters stated that the only way to guarantee compliance, and to ensure that design and construction controls work is to require ground water monitoring. Another commenter advocated requiring ground water monitoring for all sewage sludge monofills, land application sites, and surface disposal sites unless conditions warranting an exemption could be demonstrated.

Other commenters suggested that the Agency develop a national "non-degradation policy" for all ground waters underlying monofills rather than establishing national numerical limitations, and that national regulations should not allow the deliberate pollution of ground waters. However, another commenter argued that EPA does not have the statutory authority under the Clean Water Act to establish a national ground water non-degradation policy as part of the part 503 rulemaking.

Response to Comments

The Agency disagrees that it must require ground water monitoring to ensure ground water protection. Further, the EPA disagrees that a national "non-degradation policy" is needed to protect all ground waters underlying monofills or that it lacks the statutory authority under the Clean Water Act to establish such a policy if in the future the Agency determines that such a policy is necessary to protect public health and the environment.

A fundamental regulatory principle used in developing the part 503 rule is prevention of environmental harm. The Agency believes that it is more protective and cost effective to prevent sewage sludge contamination by controlling pollutants at the source than it is to require clean-up of the contaminated ground water. Therefore, controlling the quality of sewage sludge placed in the monofill is an overriding objective of the part 503 standards.

This up-front sewage sludge pollution prevention approach is different from the alternative approach taken in the "Solid Waste Disposal Facility Criteria" 40 CFR part 258 (see 56 FR 50978, October 9, 1991). The criteria for MSWLFs use location, design, and operating criteria to achieve a ground water protection performance standard. In addition to those criteria, the Agency also requires that owners or operators of MSWLFs monitor the ground water and take corrective action when necessary. This ground water monitoring serves as a method of verifying the adequacy of the design and operation of a particular MSWLF. Ground water monitoring and corrective action were mandated for the regulations by section 4010 of RCRA "as necessary to detect contamination."

Consistent with its pollution prevention objective, the part 503 rule requires that treatment works monitor the quality of sewage sludge before the sewage sludge is used or disposed of at any site. EPA's analysis based on the available scientific and technical information, indicates that if the pollutant concentrations do not exceed the limits in the part 503 regulations, the pollutants are unlikely to migrate to the ground water, especially at levels that exceed the drinking water standards. In such circumstances, the Agency believes that requiring ground water monitoring and corrective action, in addition to sewage sludge testing, is not justified or necessary to protect public health and the environment.

Final Action

The Agency has decided to retain the proposed pollution prevention approach and numerical pollutant limitations for sewage sludge quality to ensure protection of ground waters underlying sewage sludge use and disposal sites.

The Agency has not established a national non-degradation policy for all ground waters but will consider such a policy in future rulemakings if the Agency determines it is necessary to further protect public health and the environment from the use or disposal of sewage sludge.

The Agency used exposure assessment models to simulate the movement of the pollutant into and through the soil profile to the ground water. The models calculate a pollutant concentration that will not exceed an MCL at the point of compliance. For land application practices, the point of compliance is the point where the leachate enters the aquifer. For surface disposal practices, the point of compliance is immediately below the property boundary or 150 meters from the sewage sludge unit boundary, whichever is less.

The Agency's objective in establishing the pollutant limits for the use and disposal of sewage sludge is to ensure that the pollutant concentrations reaching the ground water do not exceed the drinking water standard or, if no drinking water standard exists, other appropriate human health criteria. This ground water protection standard is the basis for the Agency's determination that the pollutant limits are adequate to protect public health and the environment from any reasonably anticipated adverse effect of a pollutant.

Surface Disposal Vs. Treatment/Storage

Comments on the Proposed Approach

Numerous commenters argued that the one year cut-off for designation as a sewage sludge surface disposal site (as opposed to a treatment or storage site) is unrealistic and should be changed. Many commenters felt that interim storage and treatment should be excluded from the definition of surface disposal, and that the definition did not clearly differentiate between long and short-term storage or between treatment and disposal. Several of the commenters suggested cut-off limits for storage and treatment ranging from two to 10 years. Other commenters maintained that surface disposal sites should be regulated the same as monofills, or that exceptions should be made for facilities with adequate ground water protection such as liners.

Response to Comments

The Agency agrees that the one year time period may not adequately differentiate surface disposal from treatment or storage. As modified in the final rule, the Agency believes that the definition accurately captures the critical elements distinguishing treatment from storage. For treatment works, the final rule provides an opportunity to demonstrate that storage may require retention for a greater period than the regulatory baseline. EPA concluded that, applying these standards, regulatory authorities and permit writers can distinguish among facilities used for sewage sludge treatment, storage and disposal.

In the proposal, the Agency defined a surface disposal site as an area of land on which only sewage sludge is placed for a period of one year or longer. The one year time period was used to differentiate surface disposal from treatment or storage practices not covered under the part 503 rule.

In 1984, when the Agency initiated the part 503 rulemaking process, surface disposal sites were considered surface impoundments that were used for treatment or interim storage, not permanent disposal facilities. Subsequently, the Agency has learned that some communities use surface impoundments for extended periods of time, suggesting that the practice is, in fact, the community's method of disposal. When surface impoundments are used for the final disposal of sewage sludge, they are surface disposal sites and are subject to the CWA's requirements as a disposal method. The CWA requires the Agency to develop standards for use or disposal methods that are adequate to protect public health and the environment from any adverse effect of each pollutant.

Sewage sludge is applied to the land for use or disposal. Sewage sludge is applied to agricultural and non-agricultural land, and sewage sludge products are distributed in commerce for use in home gardens, to take advantage of the nutrient and soil conditioning properties of sewage sludge. However, surface disposal practices do not use the nutrient and soil conditioning properties for a beneficial use. Rather, many of these disposal practices use the soil simply to bind the metals and use soil microorganisms, sunlight, and oxidation to destroy the organic matter in the sludge. Disposing of sewage sludge in monofills is also a method of surface disposal that does not use the beneficial characteristics of sewage sludge.

Final Action

Based on public comment and information obtained from the National Sewage Sludge Survey, the Agency has decided to increase the one year time period used to differentiate sewage sludge surface disposal from treatment or storage to two years. The Agency believes a two year time period is appropriate for differentiating sewage sludge surface disposal from treatment and storage, and has made this change to the definition of surface disposal because certain treatment practices (e.g., composting, sludge drying beds, etc.) and storage facilities may process and store sewage sludge for periods exceeding the proposed one year time limit. The Agency believes that permit writers will be better able to distinguish between those facilities legitimately treating and storing sewage sludge and those practicing surface disposal if EPA specifies a general time limitation. For the purpose of the final rule, the Agency has also merged application of sludge to dedicated land and disposal in monofills (i.e., sludge-only landfills) under the definition of surface disposal.

The two year time limit will reduce the burden on the regulated community operating legitimate treatment and storage facilities. The yardstick permit writers must apply to distinguish between legitimate use and disposal practices is the two year time limitation. If retained and not treated for more than two years, the sewage sludge is presumed to be disposed. If the practice does not meet this simple test it is subject to the part 503 surface disposal regulations. If stored or treated the sludge is not subject to these regulations. For flexibility in cases where the facility legitimately treats or stores for periods longer than two years, the owner or operator of the facility can prepare an explanation (for review by the permitting authority, if requested) as to why treatment or storage must continue beyond the two year limit and gain relief from this requirement.

Feasibility of THC Monitoring

Comments on the Proposed Approach

Many commenters indicated that total hydrocarbon (THC) monitoring has not been shown to be practical for sewage sludge incinerators and carbon monoxide (CO) monitoring should be used instead. These commenters suggested CO monitoring since it has been demonstrated in other incinerator applications and is simpler to operate and maintain. Some commenters argued that THC monitoring is more costly than EPA estimated and would result in many sewage sludge incinerators having to install afterburners unnecessarily. Other commenters recommended that EPA should use THC monitoring to determine overall combustion efficiency of the incinerator and set minimum temperatures, or specify afterburners to

ensure complete destruction or organic pollutants.

Response to Comments

The Agency disagrees that THC monitoring is not feasible for sewage sludge incinerators or that afterburners need to be required to ensure complete destruction of organic pollutants. Because of questions raised about the feasibility and reliability of the THC monitoring of sewage sludge incinerator emissions, EPA sponsored a long-term demonstration of a heated flame ionization detection (FID) system for use as a THC monitor at the Metropolitan Waste Control Commission (MWCC), Metropolitan Wastewater Treatment Plant in St. Paul, Minnesota. The plant has six multiple hearth sludge furnaces, with wet venturi scrubbing systems and waste heat recovery boilers. A heated total hydrocarbon measuring instrument, a Beckman Model 402, was installed on incinerator No. 9 on June 19, 1989.

The MWCC plant was selected for this study because the plant's management approached the Agency about conducting a cooperative research activity and the incinerator facility has a sophisticated computer control system that allows for the collection and analysis of incinerator and air pollution control device operating data.

The objectives of the study were as follows:

1. Demonstrate the feasibility and long term reliability of an FID system on a full scale sewage sludge incinerator.

2. Determine the costs of operation and maintenance of the FID monitor.

3. Evaluate the effects of various incinerator operating parameters on THC emissions such as operating temperatures, excess air rates, transient operating conditions, and scrubber operation.

4. Correlate the organic emissions from the incinerator with the THC readings to strengthen the Agency incinerator emission data base and to further support the regulation of total organic compound emissions through the regulation of THC emissions.

The heated FID system operated satisfactorily over the two year study. Several modifications to the standard gas sampling system were made that contributed to the success of the project.

a. A 180-degree shroud was installed on the upstream side of the sintered metal stack sampling probe. This has the effect of reducing the direct impact of stack gas stream particles on the sintered metal sampling probe and is believed to greatly reduce plugging of the sampling probe.

b. The sintered metal sample probe is routinely back purged with calibration gases during the bi-weekly instrument calibration and maintenance check.

c. The temperature of the sampling system instrument was raised from 150 °C to 190 °C. At 190 °C, erratic behavior of the system ceased and stable operation was achieved. It is theorized that at the 150 °C operating temperature, moisture in the stack gas was causing the unstable operation. It appears that at least for the St. Paul incinerator system, which has a stack temperature of 90–100 °F (32–38 °C), 190 °C is necessary for successful operation. Based on this experience, each facility will be able to arrive at its own optimum operating temperature of at least 150 °C.

With these modifications of the FID system, the system performed quite well. During the study, the THC system was operational approximately 95 percent of the time. Most of the instrument down time was due to the normal maintenance shut-down of the incinerator itself.

The hot FID instrument collected data which were used in a number of analyses. For example, the THC levels in the stack have been found to correlate very well (correlation co-efficient, $r^2=0.90$) with the top hearth gas temperatures. Carbon monoxide instrument data do not show as good a correlation with either top hearth gas temperatures or THC data. A second heated FID system was put into operation on October 10, 1989. The readouts of both instruments correlate very well, with only a 10 percent difference between the two THC readouts. Additional parametric tests on upset operating conditions and scum burning were conducted. Also measurements of emissions of individual semi-volatile and volatile organic compounds were conducted so that EPA could better correlate THC measurements with total organic compound emissions and better understand the health risks associated with THC readings.

The operating and maintenance costs of the hot FID system at St. Paul have been documented. For the period of June 19, 1989 to December 31, 1989, 160 labor hours were spent on operation and maintenance of the system. The Agency feels that this is a reasonable effort to ensure that emissions of organic pollutants are controlled to acceptable health risk levels.

EPA conducted additional demonstrations of THC and CO monitoring on sewage sludge incinerators in fiscal years 1991 and 1992. Results of these demonstrations further showed the viability of continuous THC/CO monitoring of sludge combustion systems (Reference number 110). EPA is now convinced that THC monitoring is a viable regulatory tool.

Final Action

Based on study data, the Agency has decided to require THC monitoring using a heated flame ionization detection system to control organic emissions from sewage sludge incinerators. The results of the study demonstrate the feasibility and long term reliability of THC monitoring using a heated (150 °C) FID system. Operating and maintenance costs are competitive with other monitoring systems used in sewage sludge incinerators such as carbon monoxide monitors. In addition, THC reading from the FID system showed excellent correlation with organic pollutant emissions for the sewage sludge incinerators tested.

Incinerator Stack Height Option

Comments on the Proposed Approach

Nine commenters supported a part 503 provision that would allow owners and operators of sewage sludge incinerators the flexibility of raising their stack heights using "good engineering practice" (GEP) to meet numerical pollutant limits before requiring the installation of best available control technology (BACT) air pollution control equipment. Many of the commenters felt that this would be an appropriate provision for the risk-based part 503 rule because many existing facilities have relatively short stacks that can result in downwash exposing incinerator operators and nearby citizens to high levels of incinerator emissions. Two commenters opposed the raising of incinerator stacks arguing that deposition exposure and the overall aggregate risk from incinerator emissions would not be reduced by increasing stack height.

Response to Comments

The Agency agrees that owners and operators of sewage sludge incinerators should have the option of raising the height of their stacks using GEP (as required under 40 CFR 51.100) to meet part 503 numerical pollutant limitations before taking other corrective measures such as installing expensive air pollution equipment. In the proposal, the Agency solicited comments on whether to deny owners and operators of incinerators an opportunity to raise the height of their stacks after the effective date of the rule, as the means of complying with the numerical limits in the rule. Raising the stack height

increases the amount of dispersion, thereby reducing the concentration of the pollutants that reach the MEI. However, increasing the height of stacks does not reduce the mass emissions of the pollutants. Therefore, national cancer incidence (the number of cancer cases due to the pollutants being emitted) may not change significantly, if owners or operators choose to meet these requirements by merely increasing the height of their stacks.

The legislative history of section 405 of the CWA directs the Agency to establish numerical limits that protect the health of individuals or populations which are at higher risk than the population as a whole (Cong. Rec., S1624, October 16, 1986). If, in complying with pollutant limitations, all incinerators in the regulated universe install pollution control equipment (such as afterburners and wet electrostatic precipitators), EPA's analysis showed that in addition to protecting the HEI, reductions would occur in the total number of projected cancer cases as well as the number of projected adverse lead health effects. The Agency has concluded that allowing credit for actual stack height up to GEP stack height would protect the HEI and would not increase the projected number of cancer cases (incidence) nationwide.

Final Action

The Agency has decided to allow owners and operators of sewage sludge incinerators the flexibility of increasing the height of their stacks up to GEP height (see 40 CFR 51.100) in determining allowable numerical pollutant limits in the final part 503 rule. The Agency believes that this approach will continue to protect highly exposed individuals and will not increase the aggregate risk to the population as a whole from incinerator emissions at facilities that chose the stack height option as a means of complying with part 503 numerical pollutant limitations.

Incinerator Lead Emissions Limitation

Comments on the Proposed Approach

Commenters were divided on how the Agency should establish the lead emissions limitation for sewage sludge incinerators. Three commenters advocated setting the allowable lead emissions limit based on the ambient air lead levels at each facility. Another commenter argued that since lead emissions from other sources were being reduced by the Agency under other regulations, a lead emissions standard for sewage sludge incinerators was premature. One commenter questioned the Agency's logic for the 25 percent of the National Ambient Air Quality Standard (NAAQS) assumption used to derive the lead emissions limit. Still other commenters were supportive of the proposed lead emissions limit and agreed with the Agency's 25 percent portion of the National Ambient Air Quality Standard for lead as the basis for the incinerator lead emissions standard.

Response to Comments

A number of commenters supported the Agency's approach for establishing the lead emissions limitation for sewage sludge incinerators. However, the Agency concluded that some modifications to the proposed approach were necessary to take into account site-specific ambient lead levels in order to protect highly exposed individuals and populations from incinerator lead emissions. The Agency disagrees that a lead emissions standard for sewage sludge incinerators is premature because of lead reductions imposed by other EPA regulations, or that the Agency's logic used in establishing the lead emissions limitation is flawed.

In the proposal, EPA designed the standard to limit lead emissions from sewage sludge incinerators so that the ground level concentration of lead would not exceed 25 percent of the NAAQS for lead. The current NAAQS for lead is 1.5 micrograms per cubic meter (ug/m^3) maximum arithmetic mean averaged over a calendar quarter (see 40 CFR 50.12).

In deriving an allowable ground level concentration for lead from the incineration of sewage sludge, the Agency evaluated the following two alternatives: 10 percent of the NAAQS, the percent used in the revisions to the Hazardous Waste Incinerator regulation, and 25 percent of the NAAQS. States allocate a percentage of the NAAQS to various sources of lead emissions in non-attainment areas through State Implementation Plans (SIPs). At the time of proposal, most States had not included limits for sewage sludge incinerators in their SIPs, leading the Agency to believe that States did not consider sewage sludge incinerators a significant source of lead emissions.

However, allocation of a large quantity of the air-shed loading to sewage sludge incinerators is inconsistent with the Agency's goal to minimize lead exposure from all sources because of the significant biological changes that occur across a broad range of exposures to lead (down to very low levels). Limiting the contribution of lead from sewage sludge incinerators to 10 percent of the NAAQS level (i.e., 0.15 ug/m^3) would be consistent with this goal. However, allowing sewage sludge incinerators alone to contribute potentially up to 25 percent of the NAAQS may be excessive since allowing that increment could allow ambient lead levels in some areas to rise substantially from the present average background level of 0.1 ug/m^3. In addition, EPA's aggregate risk assessment showed lead emissions from sewage sludge incinerators to be the primary source of potential adverse health effects from lead when compared to other sludge use and disposal practices. The Agency's proposed approach to use 25 percent of the NAAQS was EPA's initial step in regulating lead from sewage sludge incinerators and to ensure that the increase in ground level ambient concentration of lead would not exceed the current lead NAAQS.

Final Action

The Agency has decided to revise its standard for limiting lead emissions from sewage sludge incinerators to 10 percent of the NAAQS for lead because the Agency's aggregate risk assessment shows lead emissions from sludge incinerators are the primary source of potential adverse health effects from lead, especially in small children, compared to other sewage sludge use and disposal practices.

In the final rule, the ground level concentration of lead contributed from the sewage sludge incinerator [exposure concentration to the highly exposed individual (HEI)] may not exceed 10 percent of the NAAQS for lead. The minimum ground level concentration of lead being contributed by a sewage sludge incinerator that must be achieved regardless of the ambient air lead concentration is 10 percent of the NAAQS for lead. However, States may wish to further limit the emission of lead from sewage sludge incinerators if it is warranted in non-attainment areas.

The 1978 NAAQS for lead was designed to ensure that 99.5 percent of the population has blood lead levels below 30 micrograms per deciliter (ug/dl), the level then judged to provide an adequate margin of safety from adverse health effects. The Agency now has data indicating that much lower blood lead levels are associated with a variety of adverse health effects in men, women, and particularly, in the very young. EPA is currently reviewing the current NAAQS for lead and will incorporate this new information. Until a new NAAQS is promulgated for lead, the current NAAQS will be the basis of the numerical limit when sewage sludge is

incinerated. When EPA revises the current NAAQS of 1.5 ug/m^3, the owner or operator of the sewage sludge incinerator is required under the part 503 regulations to revise the numerical limit for lead for the sewage sludge incinerator. The EPA believes that the revised standard used in the final part 503 rule is consistent with new information about low-level adverse health effects and the Agency's goal to minimize lead exposure from all sources.

Alternative Pollutant Limits

Comments on the Proposed Approach

Many commenters on both the proposal and the 1990 NSSS notice urged EPA to develop standards for a "clean sludge" (i.e., a sewage sludge that receives minimal regulation if the sewage sludge meets certain quality requirements).

Response to Comments

The Agency concurs in the view that protection of public health and the environment does not require the same level of regulatory control for "clean sludge." The requirements that a sewage sludge has to meet under this concept are discussed below and the reduction in regulatory requirements for that sewage sludge are discussed in the section on Final Action.

Results of the exposure pathway assessment for land application of sewage sludge provide cumulative pollutant loading rates for inorganic pollutants. These rates are the maximum amount of a pollutant that can be applied to a unit area of land consistent with protection of public health and the environment from reasonably anticipated adverse effects of pollutants in sewage sludge.

EPA also considered an alternative to a cumulative pollutant loading rate: determination of a pollutant concentration that, if not exceeded in the sewage sludge, would provide adequate protection. EPA derived the pollutant concentration from calculations using the already established cumulative pollutant loadings. Then, by applying certain conservative assumptions, EPA back-calculated to a pollutant concentration. Because the pollutant concentration is based on the cumulative pollutant loading rate and includes conservative safety factors, it provides the same degree of protection to human health and the environment as provided by the cumulative pollutant loading rate. Calculation of the pollutant concentration and the other parts of the "clean sludge concept" are discussed below.

To convert a cumulative pollutant loading rate to a pollutant concentration, two things must be done. First, the cumulative pollutant loading rate must be converted to an annual pollutant loading rate. For today's final rule, this was done by assuming that the entire cumulative load for a pollutant is applied to a hectare of land in one year. Thus, to convert the cumulative pollutant loading rates to annual pollutant loading rates, the cumulative pollutant loading rates were divided by one year. EPA believes this is a conservative assumption because it is unlikely that the cumulative load for the inorganic pollutants controlled in today's final rule will be applied to a hectare of land in one year.

Second, the annual pollutant loading rates calculated above were converted to pollutant concentrations using the following equation:

$$C = \frac{APLR}{AWSAR \times 0.001} \quad (1)$$

Where:

C = pollutant concentration in mg/kg (dry weight basis).

APLR = annual pollutant loading rate in kg/hectare/365 day period (dry weight basis).

AWSAR = annual whole sludge application rate in metric tons/hectare/365 day period (dry weight basis).

0.001 = a conversion factor.

The annual pollutant loading rate used in equation (1) is the cumulative pollutant loading rate divided by 100 years. The other variable in the equation is the annual whole sludge application rate (AWSAR).

The Agency assumed the AWSAR used in equation (1) is 10 metric tons per hectare per year for 100 consecutive years. EPA believes that the pollutant concentrations derived from this equation are conservative because it is unlikely that any one site will receive 10 metric tons of sewage sludge per hectare per year for 100 consecutive years. In addition, the nutrient requirements of crops grown on agricultural land most likely will not require that sewage sludge be applied to the land every year for 100 consecutive years. A typical AWSAR for agricultural land based on crop nutrient requirements is 7 metric tons per hectare. Typical AWSARs for a public contact site, forest, and a reclamation site are 18, 26, and 74 metric tons per hectare, respectively. Thus, for agricultural land, a public contact site, forest, or a reclamation site, the Agency has determined based on the following analysis that pollutant concentrations derived from equation (1) provide an adequate level of public health and environmental protection because sewage sludge could be applied for significantly more consecutive years than would actually occur at such sites given their nutrient requirements.

If sewage sludge is applied to agricultural land at an AWSAR of 7 metric tons per hectare; to a public contact site at an AWSAR of 18 metric tons per hectare; to forest at an AWSAR of 26 metric tons per hectare; and to a reclamation site at an AWSAR of 74 metric tons per hectare and if the sewage sludge meets the pollutant concentrations calculated using equation (1), approximately 142 years, 55 years, 38 years, and 13 years, respectively, are required before the cumulative loading rate for a pollutant is exceeded. The Agency has concluded that it is unlikely that sewage sludge will be applied to those types of land for greater than the above number of years for each type of land.

As discussed above, the Agency believes the pollutant concentrations calculated using equation (1) only should be part of the "clean sludge concept." The other parts of that concept are pathogen requirements and vector attraction requirements. To minimize the regulatory requirements for a sewage sludge that meets certain requirements, EPA believes that a sewage sludge should meet the highest quality requirements in today's final rule for pathogens. Those are the Class A requirements. If Class A pathogen requirements are met, no restrictions are imposed on the site where the sewage sludge is applied.

The Agency also believes that certain vector attraction requirements should be met to minimize the regulatory requirements for a sewage sludge. This is achieved if the sewage sludge meets one of eight vector attraction requirements in the final regulations. If a sewage sludge meets the pollutant concentrations calculated using equation (1), the more stringent Class A pathogen requirements in today's regulations, and one of eight vector attraction requirements in the final rule, EPA believes that the regulatory requirements for that sewage sludge can be reduced if the sewage sludge is applied to the land. This reduction is discussed below.

Final Action

Today's final rule indicates that if a sewage sludge or material derived from sewage sludge meets the pollutant concentrations for high quality sludge in Table 3 of section 503.13, the more

stringent Class A pathogen requirements, and one of eight vector attraction requirements; the general requirements and management practices in the final regulations for land application do not apply if the sewage sludge or material derived from sewage sludge is applied to the land. The minimum frequency of monitoring, recordkeeping, and reporting requirements in the land application subpart do apply, however, if the sewage sludge or material derived from sewage sludge is applied to the land. These requirements apply because the Agency has to have information to determine whether the sewage sludge or material derived from sewage sludge meets the above three quality requirements.

The reduction in the applicability of the land application general requirements and management practices applies both to bulk sewage sludge applied to the land and to sewage sludge sold or given away in a bag or similar enclosure for application to the land. As mentioned above, it also applies to a material derived from a sewage sludge. The material in this case is derived from a sewage sludge that does not meet the three quality requirements discussed above.

The final regulations address another situation for the "clean sludge concept." That situation concerns a material derived from a sewage sludge that meets the pollutant concentrations in Table 3 of section 503.13, the Class A pathogen requirements, and one of the eight vector attraction requirements. Because the sewage sludge meets those three requirements, neither the land application standards (i.e., general requirements and management practices) the minimum frequency of monitoring requirements, the recordkeeping requirements, nor the reporting requirements in the land application subpart apply if the material derived from the sewage sludge is applied to the land. This is true for both a material applied to the land and to a material sold or given away in a bag or similar enclosure for application to the land.

Part IX: Selection of Pollutants for Regulation

The final sludge use and disposal regulations establish numerical pollutant limits for 10 metals and an operational standard for total hydrocarbons emitted from sewage sludge incinerators. The proposed regulation would have established numerical pollutant limits for 28 inorganic and organic pollutants, as well as total hydrocarbons. After further analysis of information provided on the proposal and the data from the NSSS, the Agency decided not to establish numerical pollutant limits in the final part 503 rule for certain pollutants which the Agency had proposed to regulate for the reasons explained below.

Section 405 does not direct EPA to establish use and disposal standards for all pollutants. Rather, the statute requires EPA to develop numerical pollutant standards for pollutants "which, on the basis of available information on their toxicity, persistence, concentration, mobility, or potential for exposure, may be present in sewage sludge in concentrations which may adversely affect public health or the environment." 33 U.S.C. 1345. EPA applied these criteria when it identified pollutants that it evaluated and proposed for regulation. However, in the final rule, the Agency determined that certain pollutants should not be regulated because they either are not present in sludge, or if present in the sewage sludge, the potential for exposure (and consequent health or environmental risk) is small.

EPA concluded a pollutant is not present in concentrations which pose a public health or environmental risk using the following criteria:

(1) The pollutant is banned or restricted by the Agency or no longer manufactured or used in manufacturing a product. Or,

(2) The pollutant is not present in sewage sludge at significant frequencies of detection based on data gathered from the NSSS. Or,

(3) The Agency's risk assessment for the pollutant shows no reasonably anticipated adverse effects on public health or the environment at the 99th-percentile concentration found in sewage sludge from the NSSS.

Initially the Agency selected pollutants for regulation in the part 503 proposal based on a comparison of the highest observed concentration of the pollutant found in the "40 City Study" with a safe pollutant concentration derived from its screening assessment (i.e., an exposure assessment based on a very simple and over protective exposure model). If the highest observed concentration of the pollutant from the "40 City Study" was less than the pollutant concentration from the screening assessment, the pollutant was not proposed for regulation in "Round One."

As discussed in part V, the Agency determined prior to proposal that POTWs selected for analysis in the "40 City Study" were not representative of all the POTWs in the United States because the study was not statistically designed for that purpose. Moreover, the Agency concluded that pollutant concentrations from the study did not accurately represent sludge quality and that some sludges may be more contaminated than those observed. As a result of these and other deficiencies, the Agency conducted the National Sewage Sludge Survey. The NSSS was specifically designed to resolve the deficiencies in the "40 City Study" data base and to allow EPA to accurately estimate percentile concentrations of pollutants in sludge throughout the United States. However, the NSSS was not perfect in every respect.

In developing the above criteria, the Agency selected pollutant concentrations based on the 99th-percentile from the NSSS because of uncertainty in higher percentile concentrations. Because sludge quality had improved since the "40 City Study", the Agency found when it conducted the NSSS that many pollutants were at such low concentrations that they were not detectable, even using advanced analytical methods. Because of the large number of nondetectable readings for organics, extrapolation to higher concentration values for those pollutants would create a high degree of uncertainty in the pollutant concentrations. For example, N-nitrosodimethylamine was not detected in any of the samples analyzed for the NSSS. However, the calculated highest value based on use of detection limit estimates is 1,090 mg/kg. The Agency determined that the 99th-percentile pollutant concentration estimates significantly reduced this uncertainty and used this percentile in its criteria to select pollutants for regulation in the final rule.

The Agency determined that it would not establish numerical pollutant limits for any pollutant meeting one of the three criteria. For example, if a pollutant is banned from production, it is highly unlikely that it will be present in sewage sludge, and there is no consequent need to establish numerical limits for that pollutant. In the case of a number of banned and no longer manufactured pesticides that EPA had proposed to regulate, examination of the NSSS data also confirmed that these pesticides were not present in sewage sludge.

One advantage of the approach the Agency has adopted for the final rule is that it will save monitoring resources so that POTWs can focus on looking for only those pollutants of concern. Fourteen pollutants met the criteria detailed above and are no longer

regulated in the final part 503 rule: Aldrin/dieldrin, benzene, benzo(a)pyrene, bis(2-ethylhexyl) phthalate, chlordane, DDT (and its derivatives DDD and DDE), dimethyl nitrosamine, heptachlor, hexachlorobenzene, hexachlorobutadiene, lindane, polychlorinated biphenyls, toxaphene, and trichloroethylene. Further details on the analysis used in deciding not to regulate these pollutants is provided in Appendix A (Justification for the Deletion of Pollutants from the Final Standards for the Use or Disposal of Sewage Sludge) of the Technical Support Document for Land Application.

Table IX–1 lists the 11 pollutants for which the Agency is promulgating numerical limits when a particular use or disposal practice is employed.

TABLE IX–1.—POLLUTANTS FOR WHICH NUMERICAL LIMITS ARE PROMULGATED IN PART 503

Pollutants	LA	SD	I
Arsenic	X	X	X
Cadmium	X		X
Chromium	X	X	X
Copper	X		
Lead	X		X
Mercury	X		
Molybdenum	X		
Nickel	X	X	X
Selenium	X		
Total hydrocarbons [1]			X
Zinc	X		
	10	□	6

[1] Total hydrocarbon emissions encompass all organic compounds in the emissions of an incinerator.

Key:
LA—land application.
SD—surface disposal (including monofill).
I—incineration.

Part X: Aggregate Risk Assessment for the Final Part 503 Regulation

This part of the preamble discusses the aggregate risk assessment conducted to evaluate the effects of the final part 503 regulation on public health. EPA performed this evaluation by first estimating the "baseline" public health impacts of sewage sludge use and disposal without the part 503 regulation. Next, EPA assessed the public health impacts after implementing the final part 503 regulation. The difference between these two estimates is the public health "benefit" of the final part 503 regulation.

The aggregate risk assessment was designed to estimate both the expected national human health risks associated with current baseline use and disposal of sludge and the benefits of the regulation measured in terms of estimated reductions in human health risks. Methods for determining these risks differ for each of the management practices (incineration, surface disposal and land application). In general, the Agency used a sample of plants from the analytical component of the National Sewage Sludge Survey to represent the larger universe of actual facilities and used additional information on these plants from the questionnaire portion of the NSSS. EPA then developed a profile of national sewage sludge use and disposal practices based on the information obtained in the NSSS. Further, EPA also used NSSS data to assign pollutant concentrations under baseline conditions to plants in different categories.

Data describing cancer potency or other types of dose-response effects were then used to translate estimated exposure to each pollutant into measures of individual risk. Results were then aggregated to determine the likely number of individuals experiencing each relevant health effect expected per year in the affected populations as a result of exposure to sludge pollutants. For those pollutants for which dose-response relationships could not be obtained, predicted exposure was compared to risk reference doses, describing thresholds of exposure below which adverse health effects are not expected. Estimated health risks from these plants under current practices were extrapolated using weighting factors from the survey and other data describing the current inventory of sludge incinerators to calculate risks at the national level. More details on the aggregate risk assessment may be obtained from the document entitled "Human Health Risk Assessment for the Use and Disposal of Sewage Sludge: Benefits of Regulation." Information on obtaining single copies of this document is provided in part XIV.

Surface Disposal

For those plants reporting the use of surface disposal for managing their sludge, data describing the volume and quality of the sludge disposed were obtained from the NSSS. Other sources provided data describing location, topography, design and operation of surface disposal sites. These two types of data were used by the Agency to examine the possible migration of pollutants from these sites to nearby ground water or ambient air in order to determine baseline health effects. Data for the density of human populations and drinking water wells in each county containing a sampled surface disposal facility were used to determine the size of the population likely to be exposed to various levels of pollutants near the surface disposal sites. Next, the Agency estimated the likely dose of each pollutant to subgroups of exposed populations. These estimates of exposure were combined with available dose-response data and the estimated sizes of exposed populations to predict likely individual and aggregate health risks resulting from the disposal of sludge. Finally, results were extrapolated to the national level using weighting factors developed from the surveyed facilities to estimate aggregate risks from surface disposal practices under current conditions.

Results of the baseline assessment indicate less than 0.1 cancer case, less than 1 individual who exceeded a threshold blood lead level associated with adverse lead effects, and less than 1 individual experiencing lead-induced hypertension or learning disabilities associated with the placement of sewage sludge on a surface disposal site. Post-part 503 effects remain less than 0.1 cancer case, less than 1 individual who exceeds a threshold blood lead level, and less than 1 individual with a lead case from the placement of sewage sludge on a surface disposal site. This indicates a low impact on public health from placement of sewage sludge on a surface disposal site before promulgation of the rule and even a greater level of protection after implementation of the final part 503 regulation.

Land Application

For predicting the impacts from land applying sewage sludge, the Agency used average values for the concentrations of each pollutant measured in the sludge of facilities practicing land application from the NSSS. Again, the Agency used mathematical models to predict the transport of pollutants to nearby ground water and ambient air for the baseline assessment. However, additional models were used to predict the uptake of pollutants from treated soil to agricultural crops and animal tissues and to estimate contamination of surface water. Based on average population densities and assumptions about the distribution of treated produce in national markets, the Agency estimated current human exposure to and risk from each pollutant in sludge and through each relevant pathway of exposure from prototype facilities. As with surface disposal, the final step in the assessment of current risks was to extrapolate results to the national level, based on the estimated number of facilities practicing land application and the quantity of sludge applied.

As explained earlier, the basic strategy for calculating health benefits is to estimate health risks under current conditions, estimate health risk after regulation, and subtract to estimate health benefits achieved by the regulation. The above analysis was done to determine the aggregate effects before implementation of the final part 503 regulation (i.e., at baseline) and after implementation of the final part 503 regulation. The baseline assessment resulted in less than 1 cancer case, approximately 1000 individuals for whom a threshold lead concentration is exceeded, and approximately 500 individuals experiencing lead-related effects (i.e., hypertension in adult males and children with reduced Intelligence Quotient) associated with the application of sewage sludge to the land. In no case did the average exposure to the other inorganic pollutants for which limits are included in the land application exceed the reference dose for the pollutant during the baseline assessment.

Results of the aggregate risk assessment after implementation of the final part 503 land application regulations are less than 1 cancer case, less than one individual who exceeds a blood lead level, and less than one lead case. This establishes that the rule adopted today will protect public health and ensure that continued disposal of sludge will not jeopardize public health in the future.

Sewage Sludge Incineration

For those plants reporting the use of incineration for managing their sludge, data describing the volume and quality of the sludge incinerated were obtained from the NSSS. Other sources provided data describing local meteorology and likely emissions of pollutants from these facilities. These two types of data were combined as inputs for mathematical models to predict (on a site-specific basis) the fate and transport of emitted pollutants. Resulting estimates for expected concentrations of pollutants in ambient air were next combined with site-specific data describing the locations and sizes of human populations residing near the facilities sampled. By mapping predicted ground-level concentrations of each pollutant (by geographic location) onto the locations and sizes of human populations near each facility, the Agency determined the expected dose of each pollutant received by exposed individuals under current conditions.

For estimating benefits from the regulation of sewage sludge incineration, the Agency estimated expected response of individual facilities that are expected to be out of compliance with the regulation. The Agency then assumed that those facilities would choose to install and operate pollution control equipment in order to comply with the rule. Estimated emissions for each individual incinerator in the survey were adjusted for the estimated efficacy of that facility's expected control measures to estimate emissions after compliance with the part 503 regulation. After these adjustments, all calculations were repeated to determine expected exposure and risk to surrounding populations. As before, these results were extrapolated to the national level based on the estimated volume of sludge incinerated annually and results from dispersion modeling of the full inventory of known incinerators.

Results of the assessment prior to implementation of the final part 503 regulation indicated 0.3–4 cancer cases, 700 people with blood lead levels that exceed threshold levels for identified adverse health effects, and 100 people with lead-related adverse health effects because of the firing of sewage sludge in sewage sludge incinerators. Implementation of the final part 503 regulation would reduce these risks to 0.2–4 cancer cases, 90 people with blood lead levels that exceed a threshold blood lead level, and 30 people with other lead-related health effects cases because of firing of sewage sludge in a sewage sludge incinerator.

Conclusions

The aggregate risk assessment estimates that current use and disposal practices contribute 0.9–5 cancer cases annually, with a lifetime cancer risk to a highly exposed individual ranging from 6×10^{-4} for land application and surface disposal of sludge to 7×10^{-3} for incineration. The other health effects associated with sewage sludge use and disposal are primarily related to lead exposure and result in approximately 2,000 individuals who exceed a threshold blood lead level associated with adverse health effects and 700 instances of hypertension or diminished learning capacity in children. The Agency estimates that the rule reduces cancer cases by 0.09–0.7, exceedences of lead adverse health threshold by 600–2,000 and instances of lead cases by 90–600.

These results indicate that current use and disposal practices for sewage sludge pose little risk to public health. Because of uncertainties in estimated emissions of organic pollutants from incinerators, estimates of baseline risks are reported as ranges, where the lower extreme of each range is based on "best estimates" of emissions, and the higher extreme is based on "worst case" estimates. For "best estimates" of emissions, the Agency used mean reported values of emissions for each organic pollutant tested. For samples in which a particular pollutant was not detected, limits of detection were used in calculating the mean. "Worst case" estimates are based on these same values and limits of detection, except they represent a 99th-percentile confidence limit for the mean. In addition, "worst case" estimates of cancer risks have been adjusted by a factor of five to account for the possibility that up to 80 percent of the carcinogenic pollutants in organic emissions may not have been identified and quantified and could possibly pose risks comparable to those included in the study. Use of "worst case" estimates for emissions yields risk estimates about a factor of 10 higher than those based on "best estimates."

Because of uncertainties about the likely response of individual POTWs to the regulation, expected health benefits from the regulation cannot be quantified precisely. For incinerators, reductions in emissions of metals have been estimated from the assumed removal efficiencies of additional pollution control devices expected to be installed at selected incinerator facilities. For organic pollutants, however, sufficient data were not available to determine to what extent, if any, the standard for total hydrocarbons will reduce emissions. In the absence of such data, the estimated benefits are based on the assumption that emissions of organic pollutants are not reduced; if emissions are indeed reduced, benefits may have been underestimated. Similarly, sufficient data were not available for determining how the regulation will reduce human exposure and risk from land application and surface disposal. Estimates of benefits from regulating these practices therefore range from zero to 100 percent of estimated baseline risks. Even though the estimated baseline risks from all three practices are very low, the assessment shows that the adoption of the final standards for land application, surface disposal and incineration will ensure that these methods of sludge use and disposal will not pose any significant threat to public health in the future.

Part XI: Description of the Final Part 503 Regulation

Introduction

This part describes the standards EPA is promulgating in the final part 503 regulation for the use or disposal of

sewage sludge. The standards consist of general requirements, pollutant limits, management practices, operational standards, and requirements that address frequency of monitoring, recordkeeping, and reporting. Today's regulation requires that the following persons maintain certain records: Any person who generates sewage sludge or derives a material from sewage sludge, any person who applies sewage sludge to the land, any owner/operator of a surface disposal site, and any person who fires sewage sludge in a sewage sludge incinerator. The final regulation also establishes reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more.

In the part 503 regulation, EPA uses the phrases "land application," "apply sewage sludge," and "sewage sludge applied to the land" in a more restrictive sense than their traditional meaning to delineate sharply between different regulatory requirements. As previously explained, sewage sludge is not only disposed on land as a waste material but, in many cases, also is used to condition the soil or to provide nutrients. Thus, while sewage sludge disposed on the land is obviously "applied" to the land, the part 503 regulation uses the phrase "land application", apply sewage sludge, or "sewage sludge applied to the land" only when referring to sewage sludge used for its beneficial properties. When sewage sludge is disposed by placing it on the land, the part 503 regulation refers to this disposal practice as "surface disposal."

Additionally, requirements for sewage sludge applied to the land differ depending on whether the sewage sludge is "bulk sewage sludge" or "sewage sludge sold or given away in a bag or other container." EPA employs these terms of art to distinguish the situations in which bagged sewage sludge is typically applied in small amounts in a single application (e.g., home gardens)—called in today's rule "sewage sludge sold or given away in a bag or other container"—from those in which sewage sludge may be applied in large quantities over wide areas (e.g., agricultural use and reclamation programs)—called "bulk sewage sludge" for this regulation. In the proposed rule, EPA described this small quantity sewage sludge use as "distribution and marketing" of sewage sludge (54 FR 5745 at 5880).

Further, many of the requirements in the regulation apply to the "person who prepares sewage sludge." The regulation uses this term to describe the person or entity that effectively controls the quality of the sewage sludge or material derived from sewage sludge that is ultimately either used or disposed. In cases where a treatment works' sewage sludge is used or disposed without further treatment or mixing with other materials, the treatment works that generates the sewage sludge is the "person who prepares the sewage sludge." In cases, for example, where a treatment works generates sewage sludge that is blended with other substances, the person blending the sewage sludge is the "person who prepares the sewage sludge" because the blender controls the quality of the material that is ultimately used or disposed.

The structure of the final part 503 regulation follows closely the structure of the proposed part 503 regulation. The final regulation includes standards for: (1) Sewage sludge applied to the land (including sewage sludge sold or given away in a bag or other container for application to the land—described in the proposed rule as "distribution and marketing"), (2) sewage sludge placed on a surface disposal site (including sewage sludge placed in a monofill), and (3) sewage sludge fired in a sewage sludge incinerator. The final part 503 regulation also contains a subpart on pathogens and vector attraction reduction.

The subpart on distribution and marketing—now described as sewage sludge sold or given away in a bag or other container—in the proposed part 503 regulation now is incorporated into the subpart on land application for the final part 503 regulation. In addition, the subpart on monofills and the subpart on surface disposal are combined in today's part 503 regulation. Further, the subpart on removal credits was moved from the part 503 regulation to the pretreatment regulations in 40 CFR part 403.

EPA incorporated the proposed subpart on distribution and marketing into the land application subpart in the final part 503 regulation to avoid confusion. Sewage sludge that is sold or given away in a bag or other container (including sewage sludge sold or given away in small quantities such as pick-up truck loads) is obviously still "applied to the land." Further, the part 503 regulation no longer employs the phrase "distribution and marketing". EPA concluded that the phrase "sold or given away in a bag or other container for application to the land" is a more accurate description of the final use of the sewage sludge. Distribution and marketing implies that the sale or give away of sewage sludge is its final use rather than application to the land.

EPA combined the subparts on monofills and surface disposal in the proposal in the surface disposal subpart in the final part 503 regulation because the differences in characteristics between surface disposal sites and monofills did not merit separate treatment. In either case, sewage sludge is placed on the land for final disposal. Both disposal practices may present essentially similar potential threats to public health and the environment.

EPA moved the subpart on removal credits from the final part 503 regulation because it logically belongs with the pretreatment requirements. Lists of pollutants eligible for a removal credit with respect to the use or disposal of sewage sludge are in the amendment to the General Pretreatment Regulations (40 CFR part 403) in today's rulemaking.

The final part 503 regulation contains frequency of monitoring requirements that are spelled out for each use or disposal practice rather than in a separate subpart as in the proposal. Each subpart similarly includes recordkeeping requirements and reporting requirements for Class I sludge management facilities, POTWs with a design flow rate equal to or less than one million gallons per day, and POTWs that serve 10,000 people or more.

The final part 503 regulation also contains two appendices. Appendix A explains how to determine the annual whole sludge application rate for sewage sludge applied to the land. This new appendix is included in the regulation because the final part 503 regulation establishes limits based on annual pollutant loading rates for sewage sludge sold or given away in a bag or other container that does not meet the pollutant concentrations for high quality sewage sludge in Table 3 of section 503.13 of the regulation. The annual pollutant loading rates are used in the procedure described in appendix A to determine the annual whole sludge application rate for the sewage sludge.

Appendix B in today's part 503 regulation contains a description of processes used to reduce pathogens in sewage sludge. These processes are similar to the pathogen reduction processes described in appendix II of 40 CFR part 257. The vector attraction reduction requirements in the process descriptions in appendix II were deleted from the process descriptions in appendix B of today's regulation. Separate requirements are included in part 503 for vector attraction reduction.

Appendix D in the part 503 proposal explained how to calculate the

maximum combustion gas flow rate. This appendix has been deleted from the final part 503 regulation because of a change in the requirements for incineration of sewage sludge.

General Provisions (Subpart A)

Purpose and Applicability (Section 503.1)

The purpose of the final part 503 regulation is to establish standards that must be met when sewage sludge is used or disposed. The standards in the part 503 regulation consist of general requirements, pollutant limits, management practices, operational standards, and requirements for frequency of monitoring, recordkeeping, and reporting. The part 503 regulation establishes standards for sewage sludge applied to the land or disposed either by placing on a surface disposal site or firing in a sewage sludge incinerator. The part 503 regulation also includes requirements for reducing organisms in the sewage sludge that cause disease (pathogens). Either the Class A or Class B pathogen requirements must be met when sewage sludge is applied to the land or placed on a surface disposal site. Further, the regulation requires reduction of vector attraction—control of those characteristics of sewage sludge that attract disease-spreading agents like flies or rats—when sewage sludge is applied to the land or placed on a surface disposal site. There are no pathogen or vector attraction reduction requirements for sewage sludge fired in a sewage sludge incinerator because pathogen and vector attraction reduction is achieved during incineration.

The Agency established limits for pollutants in sewage sludge that could adversely affect public health and the environment and for which sufficient information exists to evaluate risk associated with those pollutants and to develop numerical limits. For land application, the pollutant limits along with the management practices protect public health and the environment from the reasonably anticipated adverse effects of arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc in the sewage sludge. EPA also evaluated the risks associated with organic pollutants and other inorganic pollutants applied to or placed on the land in sewage sludge and concluded that numerical pollutant limits for those pollutants are not required for the reasons explained in part IX of today's preamble.

In the case of surface disposal, the pollutant limits and management practices in this subpart protect public health and the environment from the reasonably anticipated adverse effects of arsenic, chromium, and nickel in the sewage sludge. For incineration of sewage sludge in a sewage sludge incinerator, the pollutant limits and management practices protect public health from the reasonably anticipated adverse effects of arsenic, beryllium, cadmium, chromium, lead, mercury, and nickel in the sewage sludge.

Also included in this part are operational standards for pathogen reduction and operational standards to reduce vector attraction in sewage sludge that is either land applied or placed on a surface disposal site. In addition, EPA is today establishing an operational standard for sewage sludge incinerators that limit the total hydrocarbons (THC) in the exit gas from a sewage sludge incinerator stack. The absence of rigorous analytical tools and pertinent data make the development of numerical limitations infeasible for pathogens, vector attraction reduction, and organic pollutants in sewage sludge that is incinerated.

Section 405((d)(3) authorizes the Administrator to promulgate a design, equipment, or operational standard when in the judgment of the Administrator it is not feasible to prescribe or enforce a numerical limitation for a pollutant. The Administrator concluded that it is not feasible, based on current information and the state of analytical capability, to develop numerical limitations for pathogens, vector attraction reduction, and THC at this time using the type of exposure assessment employed to develop numerical limitation for other pollutants.

In the judgment of the Administrator, the operational standards for pathogens and for vector attraction reduction protect public health and the environment from the reasonably anticipated adverse effect of pathogenic organisms (e.g., certain bacteria, enteric viruses, and helminth ova) in sewage sludge and from the characteristics (e.g., odor) of the sewage sludge that attract vectors (e.g., mosquitos and flies), respectively. In the judgment of the Administrator, the operational standard for THC protects public health from the reasonably anticipated adverse effects of organic pollutants in the exit gas from a sewage sludge incinerator stack.

The part 503 regulation also contains frequency of monitoring requirements for sewage sludge that is used or disposed and recordkeeping requirements for any person who prepares sewage sludge or applies it to the land, for the owner/operator of a surface disposal site and for any person who fires sewage sludge in a sewage sludge incinerator. In addition, reporting requirements for Class I sludge management facilities, POTWs with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more are included in the final part 503 regulation.

The recordkeeping requirements indicate who must develop and retain information, the information that must be developed, and the period that the information must be kept. These requirements are included in part 503 to make the rule self-implementing. This is discussed further in other parts of this preamble.

The final part 503 regulation requires only Class I sludge management facilities, POTWs with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more to report collected information. Other treatment works must collect and retain information for the specified period of time. Those treatment works may have to report the information to the permitting authority on request.

Some of the requirements in part 503 apply to a person who prepares sewage sludge (i.e., the person who either generates sewage sludge during the treatment of domestic sewage in a treatment works or derives a material from sewage sludge), applies sewage sludge to the land, or fires sewage sludge in a sewage sludge incinerator. Other requirements apply to the owner/operator of a surface disposal site. Still others apply to (1) sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator, (2) the exit gas from a sewage sludge incinerator stack, (3) land on which sewage sludge is applied, (4) a surface disposal site, or (5) a sewage sludge incinerator.

Compliance Period (Section 503.2)

Section 405(d)(2)(D) of the Clean Water Act, as amended, requires compliance with the part 503 regulation as expeditiously as practicable but in no case later than 12 months after publication of the final part 503 regulation, unless the final regulation requires construction of new pollution control facilities. If the final part 503 regulation requires construction of new pollution control facilities, compliance with the part 503 regulation is required as expeditiously as practicable but in no case later than two years from the date of publication of the final part 503 regulation.

The Agency chose to apply the full 12 month and two year compliance periods

to the standards in the part 503 regulation, but not to the frequency of monitoring, recordkeeping, or reporting requirements, except for total hydrocarbons. The only way to obtain information about whether the standards are met by the statutory deadline is to start monitoring the sewage sludge and keeping records before the end of the 12 month compliance period. For this reason, the part 503 regulation indicates that the frequency of monitoring, recordkeeping, and reporting requirements, except for total hydrocarbons in the exit gas from a sewage sludge incinerator stack, are effective 120 days after the effective date of the regulation (i.e., 150 days after the date of publication of the part 503 regulation).

The frequency of monitoring, recordkeeping, and reporting requirements for total hydrocarbons in the exit gas from a sewage sludge incinerator stack are effective 12 months after the date of publication of this part, unless compliance with the operational standard for total hydrocarbons in the part 503 regulation requires construction of new pollution control facilities. In that case, the frequency of monitoring, recordkeeping, and reporting requirements for total hydrocarbons are effective two years after the date of publication of the part 503 regulation.

The "date of publication" for the final part 503 regulation is the date the regulation is published in the **Federal Register**. This date is different from the "effective date" of the final regulation, which is 30 days after the date of publication of the final part 503 regulation in the **Federal Register**.

Permits and Direct Enforceability (Section 503.3)

Section 405(f) of the CWA provides that each permit issued under section 402 of the CWA to a publicly owned treatment works or to any treatment works treating domestic sewage shall include conditions to implement the part 503 regulation, unless included in permits issued under other enumerated Federal or approved State programs. In addition, the statute authorizes EPA to issue permits to treatment works treating domestic sewage solely to impose conditions to implement the regulation where none of the listed permit programs apply. Thus, the part 503 requirements may be implemented through a CWA permit, a subtitle C Solid Waste Disposal Act permit, a part C Safe Drinking Water Act permit, a Marine Protection, Research, and Sanctuaries Act permit, a Clean Air Act permit, a permit under an approved State program, or an EPA-issued "sludge only" permit. However, the requirements in part 503 must be met even in the absence of a permit for the use or disposal of sewage sludge (i.e., part 503 is self-implementing). Consequently, the responsible person must become aware of the standards in part 503, comply with the standards, monitor the sewage sludge, keep the appropriate records, and, if applicable, report information to the permitting authority even when a permit is not issued.

The standards in part 503 also are enforceable directly against any person who uses or disposes of sewage sludge through one of the practices addressed in today's final regulation. As mentioned previously, the person who uses or disposes of sewage sludge by one of the part 503 practices must become aware of the appropriate part 503 requirements and must comply with those requirements. An enforcement action can be taken against a person who does not meet those requirements even when that person does not have a permit for the use or disposal of sewage sludge.

Relationship to Other Requirements (Section 503.4)

The conditions under which sewage sludge may be disposed in a municipal solid waste landfill unit are not provided, for the most part, in part 503. These standards are established in 40 CFR part 258. In that rule, the Agency determined that public health and the environment are protected from reasonably anticipated adverse effects of pollutants in sewage sludge when sewage sludge is disposed in a municipal solid waste landfill unit that meets the criteria in part 258, as discussed earlier. Disposal of sewage sludge in a municipal solid waste landfill unit (MSWLF) that meets the part 258 criteria constitutes compliance with section 405(d) of the Clean Water Act, as amended. EPA promulgated part 258 under both the authority of section 405(d) of the CWA, as amended, and sections 1008, 2002, 4004, and 4010 of the Resource Conservation and Recovery Act of 1978 (RCRA).

Part 503 also requires that the person who prepares sewage sludge that is disposed in a municipal solid waste unit ensure that the sewage sludge meets the part 258 requirements for materials disposed in a municipal solid waste landfill unit. The sewage sludge must not be hazardous (§ 258.20) and must pass the paint filter test (§ 258.28). In addition, sewage sludge used to cover a municipal solid waste landfill unit must be suitable for that purpose (§ 258.21). Implementation of the part 258 regulations with regard to siting and operating the municipal solid waste landfill unit must be done in accordance with part 258 and subtitle D of RCRA (56 FR 50978).

Another regulation that addresses sewage sludge is EPA's storm water regulation. Even though the final part 503 regulation does not have a storm water requirement for sewage sludge that is used or disposed, the Agency concluded that it is important to recognize the storm water regulation in this preamble.

On November 16, 1990, EPA published a final rule implementing section 402(p) of the CWA, which required the Agency to establish a regulation setting forth NPDES permit application requirements for, among other sources, storm water discharges associated with industry activity. One of the 11 categories of storm water associated with industrial activity required to be controlled under this regulation is the following:

> Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge, that are located within the confines of the facility, with a design flow of 1.0 MGD or more, or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA. (40 CFR 122.26(b)(14)(ix))

In establishing this category, EPA viewed facilities such as large treatment works that engage in activities that may experience spills and bubbleovers (e.g. on-site composting and storage of chemicals) as suitable candidates for storm water permits. Such treatment works are considered to be engaged in activities whose scope and size are more akin to industry activity and, hence, should be required to obtain an NPDES permit for storm water discharges. Treatment works that fit the above description are required to pursue, by the regulatory deadlines, one of the application options provided under the Agency's storm water regulation (individual applications, group application, or notice of intent to be covered under a general permit) and to comply with the terms and conditions of any permit issued to cover discharge of "storm water associated with industrial activity".

More Stringent Standards (Section 503.5)

This section of the part 503 regulation provides the permitting authority the authority to impose more stringent standards for the use or disposal of sewage sludge than the standards in the part 503 regulation or to impose additional requirements for the use or disposal of sewage sludge. To impose more stringent standards or additional requirements, the permitting authority (i.e., either EPA or a State with an EPA-approved sludge management program) must determine that the more stringent standards or additional requirements are needed to protect public health and the environment from any adverse effect of a pollutant in the sewage sludge.

One example of when a more stringent standard may be imposed by the permitting authority concerns land applied bulk sewage sludge that meets the pollutant concentrations in 503.10(b)(3), the Class A pathogen requirements in 503.32(a), and one of the vector attraction reduction requirements in 503.33(b)(1) through 503.33(b)(8). Part 503 indicates that the general requirements and management practices in the land application subpart do not apply when the bulk sewage sludge meets these three requirements. One of the management practices that, in the general case, would apply to bulk sewage sludge meeting the defined requirements is the requirement to apply the sewage sludge at an agronomic rate. The permitting authority may decide that, because of conditions at a particular site, to protect public health and the environment from the nitrogen in the bulk sewage sludge, the bulk sewage sludge should be applied to the land at an agronomic rate even though the bulk sewage sludge is not subject to this requirement. Section 503.5(a) of part 503 allows the permitting authority to impose the agronomic rate requirement on the bulk sewage sludge that is applied to the land in defined circumstances.

As provided in section 510 of the CWA, as amended, States or political subdivisions thereof or an interstate agency also may impose more stringent standards for the use or disposal of sewage sludge than the standards in today's final rule. A State or political subdivisions thereof or an interstate agency also may establish additional requirements for the use or disposal of sewage sludge as authorized by State law.

Exclusions (Section 503.6)

This section of the final regulation discusses exclusions from the part 503 regulation. These include treatment processes, selection of a sewage sludge use or disposal practice, co-firing of sewage sludge, industrial wastewater sludge, hazardous sewage sludge, sewage sludge with a high PCB concentration, incinerator ash, grit and screenings, drinking water treatment sludge, and commercial and industrial septage.

Treatment of domestic sewage and sewage sludge was addressed in the applicability section in the part 503 proposal. That discussion was moved to the section on exclusions in today's final part 503 regulation to group all exclusions in the same section.

The final part 503 regulation does not establish requirements for the treatment of domestic sewage. The standards apply to the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. For this reason, processes used to treat domestic sewage (e.g., the activated sludge process) are not subject to the part 503 requirements.

The final regulation also does not establish requirements for the treatment of sewage sludge, except in the case of those properties of sewage sludge, other than its chemical composition, that may pose a threat to public health and the environment. Thus, requirements to reduce pathogens and vector attraction are provided in subpart D. Processes used to prepare sewage sludge for final use or disposal, such as composting, are not subject to the standards in the final part 503 regulation.

The pathogen requirements in the part 503 regulation are not based on the results of an exposure assessment. Instead, the requirements are performance standards based on the demonstrated ability of treatment processes to reduce pathogens in the sewage sludge. For this reason, some of the pathogen requirements in the part 503 regulation address the treatment of sewage sludge (e.g., raise the temperature of the sewage sludge and maintain the temperature for a specific period of time).

Selection of a use or disposal practice also was addressed in the applicability section in the part 503 proposal. That discussion was moved to the section on exclusions in the part 503 regulation for the reason mentioned above.

Although EPA encourages the beneficial use of sewage sludge (e.g., through land application), the selection of a sewage sludge use or disposal practice, whether land application or some other use or disposal practice, is a local determination (e.g., the responsibility of the municipality or authority responsible for the use or disposal of sewage sludge). For this reason, the final part 503 regulation does not establish requirements for the selection of a sewage sludge use or disposal practice. However, when the selected use or disposal practice is subject to the part 503 regulation, the standards in the part 503 regulation for that practice must be met when the sewage sludge is used or disposed.

The final part 503 regulation also do not establish requirements for co-firing of sewage sludge with other wastes or to the incinerator in which sewage sludge and other wastes are co-fired. Other wastes do not include auxiliary fuel used in a sewage sludge incinerator.

Auxiliary fuel is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, and other fuels such as gas generated during anaerobic digestion of sewage sludge and municipal solid waste. The municipal solid waste must be equal to or less than 30 percent of the weight of the material, including the sewage sludge, fired in the sewage sludge incinerator on a dry weight basis. When municipal solid waste is greater than 30 percent of the dry weight of the total material fired in the incinerator, the part 503 regulation does not apply to the material or to the incinerator.

The final part 503 regulation does not establish requirements for the use or disposal of sludge generated at an industrial facility during the treatment of industrial wastewater because those sludges are not sewage sludge. Sewage sludge is generated during the treatment of domestic sewage in a treatment works. The appropriate requirements (e.g., the requirements in 40 CFR part 257 when the sludge is disposed on the land) must be met when industrial sludges are used or disposed.

The Water Quality Act of 1987 expanded the applicability of section 405(d) of the CWA to industrial manufacturing and private processing facilities that treat domestic sewage combined with industrial wastewater. Although the legislative history of the 1987 Water Quality Act indicates that the Agency should impose requirements on any treatment works that treats domestic sewage, sufficient time was not available to develop standards for the use or disposal of sewage sludge generated at industrial facilities during the treatment of industrial wastewater combined with domestic sewage. EPA does not have sufficient information at this time on the number of industrial facilities that generate sewage sludge, the amount of sewage sludge generated at those facilities, and the practices through which the sewage sludge is

used or disposed to evaluate the impact of part 503 numerical limits for the sewage sludge. In addition, the Agency questions whether the models and data used to develop the numerical limits in the final part 503 regulation are appropriate for industrial sludge with a domestic sewage sludge component. For these reasons, the part 503 regulation does not establish requirements for the use or disposal of sewage sludge generated at an industrial facility during the treatment of industrial wastewater combined with domestic sewage (i.e., either domestic sewage generated at the industrial facility or domestic sewage generated off-site and transported to the industrial facility for treatment). The Agency may consider this sewage sludge in future revisions to the part 503 regulation.

The part 503 regulation does apply to sewage sludge generated at an industrial facility during the treatment of only domestic sewage. When domestic sewage generated at an industrial facility is treated at the industrial facility without combining the domestic sewage with industrial wastewater, sewage sludge generated during the treatment of the domestic sewage is subject to the part 503 requirements. Part 503 also applies to sewage sludge generated when domestic sewage generated off-site is treated only with the domestic sewage generated at the industrial facility or is treated at the industrial facility by itself.

It is important to note that all industrial wastewater treatment facilities that treat domestic sewage—whether the domestic sewage is generated on-site or off-site—are considered treatment works treating domestic sewage and may be required to apply for a permit under 40 CFR 122.21. A detailed discussion of whether an industrial wastewater treatment facility needs a permit is presented in the preamble to the sewage sludge permitting regulations promulgated on May 2, 1989 (54 FR 18716, 18725).

The part 503 regulation also does not establish requirements for sewage sludge determined to be hazardous in accordance with 40 CFR part 261. A hazardous sewage sludge must be used or disposed in accordance with the applicable requirements in 40 CFR parts 260 through 268.

The part 503 regulation does not establish requirements for the use or disposal of sewage sludge that has a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids (dry weight basis). Sewage sludge with a polychlorinated biphenyls concentration equal to or greater than 50 milligrams per kilograms of total solids (dry weight basis) must be used or disposed in accordance with the requirements of 40 CFR part 761, not the part 503 requirements.

Ash generated during the incineration of sewage sludge in a sewage sludge incinerator also is not subject to the part 503 regulation. Ash from a sewage sludge incinerator must be used or disposed in accordance with the appropriate requirements (e.g., 40 CFR part 257 when the ash is disposed on the land).

Grit (e.g., small pebbles, sand, and material with a high specific gravity) and screenings (e.g., large materials such as rags) generated during the preliminary treatment of domestic sewage in a treatment works that are used or disposed are not subject to the part 503 regulation. These materials have characteristics that are different than the characteristics of sewage sludge. Grit and screenings also must be used or disposed in accordance with the appropriate requirements (e.g., 40 CFR part 257 when the grit or screenings are disposed on the land).

Sludge generated during the treatment of either surface water or ground water used for drinking also is not subject to the part 503 regulation. That sludge is not generated during the treatment of domestic sewage in a treatment works.

The part 503 regulation does not establish requirements for the use or disposal of commercial and industrial septage, a mixture of commercial and domestic septage, or a mixture of industrial and domestic septage. Because the characteristics of domestic septage and the characteristics of commercial septage (e.g., grease from a grease trap at a restaurant) and industrial septage (e.g., liquid or solid material removed from a septic tank or similar treatment works that receives industrial wastewater) are different, the part 503 requirements for domestic septage do not apply to commercial or industrial septage. For this reason, commercial and industrial septage are excluded from the part 503 regulation.

Requirement for a Person Who Prepares Sewage Sludge (Section 503.7)

Under the final part 503 regulation, a person who prepares sewage sludge must ensure that the applicable requirements in part 503 are met when the sewage sludge prepared by the person is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. The preparer could be the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or a person who derives a material derived from sewage sludge. Examples of a person who derives a material from sewage sludge are a treatment works that blends sewage sludge with some other material or a private contractor who receives sewage sludge from a treatment works and then blends the sewage sludge with some other material (e.g., mixes the sewage sludge with a bulking agent). When sewage sludge is part of a material, the person derived the material from sewage sludge. Any time the quality of sewage sludge is changed, a material is derived from sewage sludge.

The purpose of this general provision is to ensure the part 503 requirements are met. The Agency concluded that the person who generates the sewage sludge or the person who derives a material from sewage sludge should be responsible for ensuring the sewage sludge is used or disposed properly. For this reason, the final part 503 regulation makes that person responsible for ensuring the applicable part 503 requirements are met when sewage sludge prepared by the person is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. This is discussed further in part XII of today's preamble.

Sampling and Analysis (Section 503.8)

This section of the final part 503 regulation requires that representative samples of sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator be collected and analyzed. The purpose of this requirement is to ensure that samples of sewage sludge that are collected are representative of the sewage sludge that is used or disposed. In some cases, grab samples may represent the sewage sludge adequately while in other cases a composite sample may have to be collected. Whatever the situation, a representative sample must be collected and that sample must be analyzed to show compliance with the part 503 requirements.

This section also contains the methods used to analyze representative samples of sewage sludge to show compliance with the part 503 requirements. Analytical methods are specified in part 503 for enteric viruses, fecal coliform, helminth ova, inorganic pollutants, *Salmonella* sp. bacteria, specific oxygen uptake rate, and total, fixed, and volatile solids. In addition, part 503 references a document that contains procedures that can be used to calculate the percent volatile solids reduction for a sewage sludge. This document, "Environmental Regulations and Technology-Control of Pathogens and Vectors, EPA–625/R–92/013, U.S.

Environmental Protection Agency, Washington, D.C., 1992, also discusses how to collect samples that are analyzed for pathogens.

Analytical methods in the final regulation are the same as the analytical methods in the part 503 proposal, except for inorganic pollutants and viable helminth ova. The numbers of the parts in "Standard Methods for the Examination of Water and Wastewater" referred to in the final regulation for various parts are different from the numbers for those parts in the proposal because a later edition of that document was referenced in the final regulation. Even though the part numbers are different, the methods are the same.

The final rule specifies that Method SW–846 be used to analyze samples of sewage sludge for inorganic pollutants. This method is used to prepare sediment, sludge, and soil samples for analysis by flame or furnace atomic absorption spectroscopy. The Agency decided to specify this method instead of the method in the proposal (i.e., Method 1620 from the Analytical Methods for the National Sewage Sludge Survey) because Method SW–846 is more widely accepted than is Method 1620, which is a draft method.

The analytical method for viable helminth ova in the final regulation is different from the analytical method for helminth ova in the proposal. EPA considers the proposed and final ova methods to be conceptually similar when floatation or similar techniques are used to separate ova from the sewage sludge. Both the proposed and final methods use microscopic ova particle visualization and characterization to enumerate the helminth ova after the sewage sludge is processed for analysis. The ova method in the final regulation was selected because it is more current that the proposed method and is more accepted in current practice.

General Definitions (Section 503.9)

Definitions included in this section of the part 503 regulation are applicable to more than one subpart in the regulation. Each subpart also includes special definitions that apply only to that subpart.

Many of the definitions in this subpart are definitions taken either directly from section 502 of the CWA or other Agency regulations. These definitions are not discussed here. The definitions developed specifically for this rule are discussed below.

Domestic septage. Domestic septage is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. The term "domestic septage" is used in the final part 503 regulation instead of the term "septage", which was used in the proposed part 503 regulation, to distinguish domestic septage from liquid or solid material that contains domestic septage mixed with other materials (e.g., grease from a grease trap). These other materials are commercial or industrial septage and are not included in the definition of domestic septage.

The definition of domestic septage also makes it clear that domestic septage includes liquid and solid material removed from portable toilets or Type III marine sanitation devices. When these materials are applied to agricultural land, forest, or a reclamation site, the domestic septage requirements in the land applications subpart have to be met. When these materials are placed on an active sewage sludge unit, the appropriate requirements in the surface disposal subpart have to be met.

Domestic sewage. Domestic sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works. This is a key definition because the standards in the part 503 regulation apply to sewage sludge generated during the treatment of domestic sewage in a treatment works. When domestic sewage is in the influent to a treatment works, even if the influent also contains industrial wastewater, sewage sludge is generated during the treatment of the domestic sewage.

Dry weight basis. Dry weight basis means calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass (i.e., essentially 100 percent solids content). This definition is in the final part 503 regulation because all of the numerical limits and operational standards in the part 503 regulation are on a dry weight basis. The dry weight basis allows an "apples to apples" comparison of the value for a parameter in sewage sludge to the numerical limit or operational standard in the part 503 regulation for that parameter. The procedure used to convert wet weight to dry weight varies depending on the type of unit measurement. For example, to convert a wet weight concentration (i.e., milligrams per liter) to a dry weight concentration, divide the wet weight concentration by the percent solids (expressed in hundredths) in the sewage sludge. To convert an application rate (i.e., metric tons per hectare) expressed in wet weight to a dry weight application rate, multiply the wet weight rate by the percent solids (expressed in hundredths) in the sewage sludge.

Feed crops. Feed crops are crops produced primarily for consumption by animals. These include, but are not limited to, corn and grass. Note that for a crop to be considered a feed crop, it has to be produced for consumption by animals. A crop such as grass that is not produced primarily for consumption by animals (e.g., grass grown to prevent erosion or to stabilize an area or as a cover) is not a feed crop. The term animals includes domestic animals and wild animals. The key to this definition is whether the crop is produced for consumption by animals.

Fiber crops. Fiber crops are crops such as flax and cotton. This definition is included in the final part 503 regulation because products from these crops (e.g., cotton seed oil) may be consumed by humans or may be used to prepare food consumed by humans. Because of the potential exposure to the fiber crop or product of the fiber crop, the Agency concluded that the part 503 requirements should apply when sewage sludge is applied to land on which a fiber crop is grown.

Food crops. Food crops are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco. Tobacco is considered a food crop, even though usually not ingested by humans, because of the potential for direct human exposure to tobacco. Because of this exposure, the Agency determined that the part 503 requirements must be met when sewage sludge is applied to land on which tobacco is grown. Food crops can be either crops grown below the land surface, crops that touch the land surface, or crops that do not touch the land surface. When a crop is consumed by humans, it is a food crop.

Ground water. Ground water is water below the land surface in the saturated zone. The saturated zone is that part of the earth's crust in which all voids in the porous materials are filled with water. The water that fills those voids is ground water.

Person who prepares sewage sludge. A person who prepares sewage sludge is either the person who generates the sewage sludge during the treatment of domestic sewage in a treatment works or a person who derives a material from sewage sludge. This definition is included in the final part 503 regulation because the regulation contains a general provision that requires any person who prepares a sewage sludge to ensure that the requirements in the part 503 regulation are met. This general provision applies only when the sewage sludge prepared by a person (i.e., the

sewage sludge generated by a person or the material derived from sewage sludge) is applied to the land, placed on a surface disposal site, fired in a sewage sludge incinerator, or placed on a municipal solid waste landfill. Other requirements for a person who prepares sewage sludge also are included in the final part 503 regulation.

Pollutant. A pollutant is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food-chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms. This definition is similar to the definition of "toxic pollutant" included in section 502(13) of the CWA, as amended.

The term "toxic pollutant" is not used in the final part 503 regulation because this generally is limited to the list of priority toxic pollutants developed by EPA. The Agency concluded that Congress intended that EPA develop the part 503 pollutant limits for a broader range of substances that might interfere with the use or disposal of sewage sludge, not just the 126 priority toxic pollutants.

Sewage sludge. The definition of sewage sludge in the part 503 regulation is similar to the definition in the proposed part 503 regulation. Besides editorial changes, the major differences between today's definition and the definition of sewage sludge in the part 503 proposal concern domestic septage and materials not considered sewage sludge.

The final part 503 regulation defines sewage sludge as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum and solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the incineration of sewage sludge or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Domestic septage is included in the definition of sewage sludge because it is generated during the treatment of domestic sewage in a treatment works (e.g., septic tank). It also has characteristics similar to the characteristics of sewage sludge. The legislative history of section 405 reflects congressional intent that the section 405(d) requirements apply to domestic septage. S. Rep. No. 50, 99th Cong. 1st Sess. p. 47 (1985). The term "domestic septage" distinguishes domestic septage from septage, which includes commercial and industrial septage (e.g., grease from grease traps).

Scum is the material that floats on top of the wastewater in a treatment process and is removed by skimming. Scum shares many characteristics with the other residues generated during the treatment of wastewater and often is disposed with sewage sludge. For this reason, scum is included in the definition of sewage sludge.

Today's definition of sewage sludge also indicates that any material derived from sewage sludge (e.g., composted sewage sludge blended with another material) is sewage sludge. When that material is used or disposed through one of the practices regulated in the final part 503 regulation, the requirements for that practice must be met.

Ash generated during the incineration of sewage sludge is not included in today's definition of sewage sludge. Incinerator ash, which is disposed typically in landfills, is sterile and dry like other ash material. It does not have the same characteristics as other residues from wastewater treatment processes.

Grit and screenings also are not included in the definition of sewage sludge. Grit is the material, such as sand and gravel, that settles out before primary treatment. Screenings are relatively large pieces of solid material caught on bar screens at the headworks of the treatment works. These wastes are small in quantity; have characteristics that are different from the characteristics of sewage sludge; and usually are handled and disposed separately.

Storage of sewage sludge. Storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. Storage does not include placement of sewage sludge on the land for treatment.

An issue related to the definition of storage of sewage sludge concerns the length of time (i.e., two years) sewage sludge is stored before storage becomes final disposal. The length of time can be expressed in two ways. First, the period of time can be related to how long the land is used for the storage of sewage sludge. It is difficult to define storage in terms of the length of time the land is used to store sewage sludge because the land may be used to store sewage sludge for a long period of time even though a particular sewage sludge only remains on the land for a short period of time (e.g., 120 days).

The second way to express length of time for storage is the age of the sewage sludge on the unit area of land. The Agency determined that this parameter is more appropriate to use to distinguish between storage and final disposal than is the period of time the land is used to store sewage sludge. The older the sewage sludge, the higher the potential that the sewage sludge may cause an adverse impact.

The definition of storage in today's final part 503 regulation does not indicate whether the two year storage period is the period the land is used to store sewage sludge or the age of the sewage sludge. Either parameter can be used to define the storage period.

Treatment of sewage sludge. Treatment of sewage sludge is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. Treatment of sewage sludge is not storage of sewage sludge.

This definition is included in the part 503 regulation to distinguish treatment from final use or disposal. Requirements in the part 503 regulation apply to sewage sludge that is used or disposed. For this reason, when the sewage sludge is treated, the part 503 standards do not apply to the sewage sludge, except when treated for pathogen or vector attraction reduction, or, in the case where land is used to treat the sewage sludge, to the land on which sewage sludge is treated.

Treatment works. Treatment works is either a Federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature. This includes septic tanks and other types of on-site treatment systems and holding tanks because domestic sewage can be treated in these types of devices. Note that, by definition, devices or systems used to treat a combination of domestic sewage and industrial waste of a liquid nature are a treatment works. Sludge generated by the treatment works is sewage sludge.

Land Application (Subpart B)

This part of the preamble discusses the part 503 requirements for land application of sewage sludge. More

details on each of the requirements can be found in the technical support document for the part 503 land application requirements.

The final regulation recognizes two broad categories of sewage sludge applied to the land and establishes requirements for each category. For both categories, the sewage sludge must meet ceiling concentrations. If those concentrations are not met, the sewage sludge cannot be applied to the land.

The first category is bulk sewage sludge applied to the land. Bulk sewage sludge is sewage sludge that is not sold or given away in a bag or other container. Bulk sewage sludge must meet one of two pollutant limits to be applied to the land. The sewage sludge must meet pollutant concentration limits, which are in addition to the ceiling concentrations discussed above, or the amount of a pollutant applied to the land in bulk sewage sludge must not exceed a cumulative pollutant loading rate. In addition, pathogen and vector attraction reduction requirements must be met when bulk sewage sludge is applied to the land. General requirements and management practices also may have to be met when bulk sewage sludge is applied to the land depending on the quality of the bulk sewage sludge.

The second category is sewage sludge sold or given away in a bag or other container for application to the land. One of two pollutant limits also must be met when sewage sludge is sold or given away in a bag or other container. The sewage sludge must meet the same pollutant concentrations mentioned above for bulk sewage sludge, or the amount of pollutant applied to the land annually must not exceed an annual pollutant loading rate. The annual pollutant loading rates are used to calculate an application rate that is placed on a label on the bag or other container in which the sewage sludge is sold or given away. The application rate cannot be exceeded when the sewage sludge is applied to the land. In addition to meeting the pollutant limits, the sewage sludge must meet the highest quality pathogen requirements (i.e., Class A requirements) and a vector attraction reduction requirement must be met. Sewage sludge sold or given away in a bag or other container also is subject to general requirements and a management practice depending on the quality of the sewage sludge.

Applicability (Section 503.10)

The applicability section for land application in the proposed part 503 regulation indicated that the requirements apply to the application of sewage sludge to the land and to any person who applies sewage sludge to land. That section has been edited to be more explicit. The final part 503 regulation indicates that the land application requirements apply to any person who prepares sewage sludge that is applied to the land, to any person who applies sewage sludge to the land, to sewage sludge applied to the land, and to the land on which sewage sludge is applied.

Some of the requirements in this subpart apply to the sewage sludge that is land applied. These requirements address the quality of sewage sludge applied to the land and the amount of pollutants that can be applied to the land in sewage sludge.

Other requirements in this subpart apply to a person who prepares sewage sludge that is applied to the land. A person who prepares sewage sludge is either the generator of the sewage sludge or a person who derives a material from sewage sludge. Still other requirements apply to the person who applies sewage sludge to the land (e.g., recordkeeping requirements depending on which pollutant limits are met). All of these requirements are discussed in more detail later in this preamble.

As mentioned previously, the part 503 use or disposal standards include general requirements, pollutant limits, management practices, operational standards, and requirements for frequency of monitoring, recordkeeping, and reporting. For land application of sewage sludge, there are three cases where not all requirements must be met to comply with the standards. These three cases concern bulk sewage sludge applied to the land and sewage sludge sold or given away in a bag or other container for application to the land.

In the first two cases, the sewage sludge or material derived from sewage sludge must meet certain pollutant limits and certain operational standards for pathogens and vector attraction reduction. In addition, the frequency of monitoring, recordkeeping, and reporting requirements in the land application subpart must be met. The general requirements and management practices do not apply when the sewage sludge or material derived from sewage sludge meets the three quality requirements.

The rationale for not imposing the general requirements and management practices on bulk sewage sludge and sewage sludge sold or given away in a bag or other container for application to the land is that the sewage sludge that meets the three identified quality requirements is a valuable commercial product. Because of this, EPA concluded that the probability of improper application of the sewage sludge is low and the additional requirements are not necessary to protect public health and the environment. In addition, the Agency determined that over-application of the sewage sludge will not occur because over-application reduces crop yield, which nullifies the main reason to apply sewage sludge to the land in the first instance. The Agency concluded that when the sewage sludge meets the three quality requirements, it is a fertilizer material and should be treated similarly to other fertilizers. For these reasons, EPA does not require that the general requirements and management practices be met when high quality sewage sludges are applied to the land. The circumstances in which these requirements need not be met are discussed further below.

For both the first and second cases, the EPA Regional Administrator (or, in the case of a State with an approved sludge management program, the State Director) could still, acting under authority in section 405(d)(4), decide to require that any or all of the general requirements and management practices be met, on a case-by-case basis, even when a sewage sludge or bulk material derived from sewage sludge meets the three quality requirements. However, this requires a finding by the Regional Administrator that the general requirements or management practices are needed to protect public health and the environment from any reasonably anticipated adverse effect of a pollutant in the sewage sludge.

An example of a management practice that could be imposed is the requirement to apply the sewage sludge or material derived from sewage sludge to the land at a whole sludge application rate (i.e., the amount of sewage sludge that can be applied to an area of land) that does not exceed the agronomic rate. When the Regional Administrator concludes this requirement is needed to protect public health and the environment from the reasonably anticipated adverse effect of nitrogen in the sewage sludge, the Regional Administrator could impose that requirement to the bulk sewage sludge. Under this provision, the control over the site where the sewage sludge is applied, which was foregone because of the general requirements and management practices do not apply, may be re-established.

In the third case, the part 503 requirements in the land application subpart do not apply to a bulk material derived from sewage sludge when the sewage sludge used to produce the

derived material meets the pollutant concentrations in 503.13(b)(3), the Class A pathogen requirements in 503.32(a), and one of the vector attraction reduction requirements in 503.33(b)(1) through 503.33(b)(8). In this case, the sewage sludge used to produce the bulk material already meets the three quality requirements.

The final part 503 regulation does not authorize the EPA Regional Administrator or the State Director to impose the general requirements and management practices on a bulk material derived from a sewage sludge that meets the three quality requirements because the part 503 requirements do not apply to sewage sludge used to make that material once the sewage sludge meets the identified quality requirements. No records have to be kept on who receives that sewage sludge or what happens to the sewage sludge after the three quality requirements are met.

The three cases for sewage sludge sold or given away in a bag or other container for application to the land are the same as the three cases for bulk sewage sludge applied to the land. In the first two cases, the general requirements in 503.12 and the management practices in 503.14 do not apply either to sewage sludge or a material derived from sewage sludge when the sewage sludge or material is sold or given away in a bag or other container for application to the land and when the sewage sludge or material meets the pollutant concentrations for high quality sewage sludges in 503.13(b)(3), the more stringent Class A pathogen requirements in 503.32(a), and one of the vector attraction requirements in 503.33(b)(1) through 503.33(b)(8). The frequency of monitoring, recordkeeping, and reporting requirements in this subpart do apply, however, to the sewage sludge or material derived from sewage sludge.

In the third case, the final part 503 regulation indicates that the part 503 requirements do not apply to a material derived from sewage sludge that is sold or given away in a bag or other container when the sewage sludge used to derive that material meets the pollutant concentrations for high quality sewage sludges in 503.13(b)(3), the more stringent Class A pathogen requirements in 503.32(a), and one of the vector attraction requirements in 503.33(b)(1) through 503.33(b)(8). The sewage sludge used to derive that material already meets the applicable quality requirements.

The provision authorizing the imposition of the general requirements and management practices after a sewage sludge or material derived from sewage sludge meets the three quality requirements does not apply to sewage sludge sold or given away in a bag or other container for application to the land. As mentioned above, this provision in part allows control over the site where the sewage sludge is applied to be re-established. The underlying assumption for sewage sludge sold or given away in a bag or other container is that there is no direct control over the user of the sewage sludge. It is virtually impossible in the case of a widely distributed sewage sludge that is essentially equivalent to fertilizer to impose controls on the end user of the sewage sludge. When there is no control over the user initially, there is no way to re-establish that control through the imposition of general requirements or management practices. For this reason, the provision concerning re-imposing certain requirements is not applicable in this case.

Special Definitions (Section 503.11)

In this section of the final part 503 regulation, the Agency defines terms used in this subpart. Those terms include: agricultural land, agronomic rate, annual pollutant loading rate, annual whole sludge application rate, bulk sewage sludge, cumulative pollutant loading rate, forest, land application, other container, pasture, public contact site, range land, and reclamation site.

Agricultural land. Agricultural land is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture. When the crop grown on the land is not consumed by humans; not produced primarily for consumption by animals; or not a fiber crop, the land on which the crop is grown is not agricultural land.

Range land and pasture are included in the definition of agricultural land because feed crops (e.g., grasses and other types of vegetation) are grown on the land. These crops are consumed by animals that graze on the land.

Agronomic rate. Agronomic rate is defined as the whole sludge application rate designed: (1) to provide the amount of nitrogen needed by the crop or vegetation grown on the land and (2) to minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water. A key aspect of this definition is the design of the whole sludge application rate. To design this rate, the nitrogen needs of the crop or vegetation grown on the land, the available nitrogen in the sewage sludge, the soil conditions at the site, and the geology of the site have to be known, among other things.

Agronomic rate is used in the final part 503 regulation to limit the amount of sewage sludge applied to the land to fertilize the crop or vegetation grown on the land. The purpose of limiting the application rate to the agronomic rate is to minimize contamination of the ground water beneath the application site by the nitrogen in the sewage sludge.

Annual pollutant loading rate. The annual pollutant loading (APLR) is the maximum amount of a pollutant that can be applied to a unit area of land during a 365-day period. In the final part 503 regulation, this rate is calculated by dividing the cumulative pollutant loading rate for an inorganic pollutant by 20 years. This is discussed further below.

Annual whole sludge application rate. The annual whole sludge application rate (AWSAR) is the maximum amount of sewage sludge on a dry weight basis that can be applied to a unit area of land during a 365-day period. This rate is for the whole sludge and not just for a single pollutant. An explanation of how to calculate an annual whole sludge application rate is in appendix A of the final regulation.

Bulk sewage sludge. Bulk sewage sludge is sewage sludge that is not sold or given away in a bag or other container for application to the land. This definition is included in the final part 503 regulation because the requirements in this subpart differ for bulk sewage sludge and for sewage sludge sold or given away in a bag or other container for application to the land.

Cumulative pollutant loading rate. A cumulative pollutant loading rate is the maximum amount of an inorganic pollutant that can be applied to an area of land. This loading rate is not an annual rate. Rather, it is the maximum amount of an inorganic pollutant that can be applied to an area of land. When the cumulative pollutant loading rate for a pollutant is reached for a particular land application site, no more of that pollutant can be applied to the site in bulk sewage sludge.

Forest. Forest is a tract of land thick with trees and underbrush. A forest includes, but is not limited to, land used for silviculture purposes and unmanaged land thick with indigenous vegetation.

Land application. Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the land so that the

sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil. One important aspect of this definition is "* * * so that the sewage sludge can condition the soil or fertilize crops or vegetation grown on the land." Sewage sludge is not disposed on the land in this case. Rather, the sewage sludge is used beneficially.

The definition of land application includes such things as using the sewage sludge to grow plants or flowers in a pot and using sewage sludge in the hole where a tree is planted. In such cases, the sewage sludge is used to fertilize the plant or tree even though the sewage sludge is not spread over a large area of land. Sewage sludge used for these purposes must meet the applicable requirements in the land application subpart of the final part 503 regulation.

When the sewage sludge is not used to condition the soil or to fertilize crops or vegetation grown on the land, the sewage sludge is not being land applied. It is being disposed on the land. In that case, the requirements in the subpart on surface disposal in the final part 503 regulation must be met.

Other container. The part 503 regulation differentiates between sewage sludge sold or given away in large quantities to users such as manufacturers of sewage sludge fertilizer products and sewage sold or given away in a bag or other container for direct use by the purchaser or receiver of the sewage sludge. Thus, the part 503 regulation distinguishes between bulk sewage sludge and sewage sludge sold or given away in a bag or other container. An "other container" is either an open or a closed receptacle and may include, but is not limited, to a bucket, a box, a carton, or a vehicle that has a load capacity of one metric ton or less.

An "other container" could be any type of receptacle in which sewage sludge, usually in small amounts, is sold or given away for application to the land. In most cases, the sewage sludge is used to fertilize a lawn or a home garden; to grow flowers in pots; to fertilize the ball of a tree that is planted, or for a similar type use. The sewage sludge usually is not applied to those types of land in several applications in the same year.

The Agency also chose to include in the definition of "other container" a vehicle that has a load capacity of one metric ton or less. The vehicle could be, among other things, a pick-up truck or a trailer pulled by an automobile.

A vehicle load capacity of one metric ton was chosen as the cut-off because of the assumptions EPA used to develop the standards for sewage sludge sold or given away in a bag or other container for application to the land. The Agency assumed that sewage sludge sold or given away is applied to the land in small amounts and that the sewage sludge is not applied to the land in several applications in the year.

EPA considers one metric ton of sewage sludge to be a small amount, particularly considering the types of land on which the Agency concluded that is sold or given away will be applied (i.e., a lawn, a home garden, or a public contract site). In addition, EPA does not believe that a vehicle with a load capacity of one metric ton or less will be used to haul the amount of sewage sludge needed on other types of land (e.g., agricultural land) and that such a vehicle will not be used to make several trips to the same site, particularly for several applications of sewage sludge. Most likely, a vehicle with a load capacity of one metric ton will be used to haul sewage sludge that is applied to a lawn, a home garden, or a public contact site.

Pasture. Pasture is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover. For the purpose of the final part 503 regulation, pasture is considered agricultural land because a feed crop is grown on the land.

Public contact site. A public contact site is land with a high potential for contact by the public. Included in this type of land are public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses. All of these lands have a high potential for contact by the public. This definition is included in part 503 because the final regulation contains specific requirements for sewage sludge applied to a public contact site.

Range land. Range land is open land with indigenous vegetation. This type of land differs from a forest in that range land is more open. Range land has indigenous vegetation, but is not thick with trees and underbrush.

Reclamation site. A reclamation site is drastically disturbed land that is reclaimed using sewage sludge. The drastically disturbed land may be a strip mine, a construction site, or some other land that has been cleared of most of its vegetation. Sewage sludge is applied to the land to help establish vegetation. The sewage sludge provides organic material and nutrients needed for the vegetation to grow.

General Requirements (Section 503.12)

The proposed regulation contained six general requirements for land application of sewage sludge. Two of those general requirements are addressed in the general requirements in the final regulation (i.e., meet the requirements in this subpart when sewage sludge is applied to the land and provide notice and information when the generator of the sewage sludge is not the applier of the sewage sludge), two are management practices in the final regulation (i.e., those concerning threatened and endangered species and application of sewage sludge to flooded, snow-covered, or frozen land), one is now addressed in the frequency of monitoring requirement in the final regulation (i.e., comply with the monitoring requirements), and one was deleted from the final regulation.

The proposed general requirement that was deleted from the final regulation concerns restricting the flow of a base flood, reducing the temporary storage capacity of a floodplain, or posing a hazard to human health, wildlife, or land or water resources because of sewage sludge in the runoff from the base flood. When sewage sludge is applied to the land, it is applied in large amounts over while areas. The sewage sludge is not piled high on the land in a small ares. In this case, the sewage sludge cannot restrict the flow of a base flood or reduce the temporary storage capacity of a floodplain. In addition, pollutant limits in the land application subpart are designed to protect run-off of pollutants into surface waters (i.e., the surface water pathway was evaluated during the land application exposure assessment). For these reasons and because the probability that sewage sludge will be land applied to a 100-year floodplain is low, the Agency concluded that this general requirement is not needed in the final regulation (it would be a management practice if included in the final regulation) to protect public health and the environment when sewage sludge is applied to the land.

There are 10 general requirements for land application of sewage sludge in the final part 503 regulation. The first general requirement is that no person shall apply sewage sludge to the land except in accordance with the requirements in this subpart. This general requirement is an explicit statement of obligation not to violate the requirements in this subpart when sewage sludge is applied to the land.

The second general requirement indicates that no person shall apply bulk sewage sludge subject to the cumulative pollutant loading rates in 503.13(b)(2) to land where any of the cumulative pollutant loading rates have been reached. This general requirement

establishes an explicit requirement not to exceed any of the cumulative pollutant loading rates at a land application site. It does not apply when the sewage sludge meets the pollutant concentrations in 503.13(b)(3).

The third general requirement concerns the application of domestic septage to agricultural land, forest, or a reclamation site. A person may not apply domestic septage to those types of land during a 365-day period when the annual application rate for domestic septage in 503.13(c) has been reached during that period. This general requirement does not apply to a public contact site because the final part 503 regulation prohibits the application of domestic septage to a public contact site at the annual application rate in 503.13(c).

The fourth general requirement concerns providing the concentration of total nitrogen (as N on a dry weight basis) in bulk sewage sludge to the person who applies the bulk sewage sludge to the land. The person who prepares the bulk sewage sludge is required to provide the applier written notification of the nitrogen concentration in the bulk sewage sludge, except for the bulk sewage sludge and bulk material that meet the three quality requirements discussed above. The purpose of this general requirement is to ensure that the person who applies the bulk sewage sludge is aware of the nitrogen concentration in the bulk sewage sludge. Without that concentration, the agronomic rate for the crop grown on the land application site cannot be designed properly.

The fifth general requirement requires any person who applies sewage sludge to the land to obtain the information needed to comply with the part 503 requirements. This general requirement establishes an explicit requirement for the person who applies the sewage sludge to become aware of the requirements (e.g., site restrictions when the sewage sludge meets the less stringent Class B pathogen requirements) that must be met when sewage sludge is applied to the land. This is a logical extension of the part 503 requirements because without the information a person cannot comply with those requirements.

The fifth general requirement also contains more detailed requirements for the applier when the bulk sewage sludge meets the pollutant ceiling concentrations in 503.13(b)(1) and is applied to a site under the cumulative pollutant loading rate concept in 503.13(b)(2). In that case, the applier must contact the permitting authority in the State where the bulk sewage sludge will be applied to determine whether bulk sewage sludge subject to the cumulative pollutant loading rates has been applied to the site since [insert 120 days after the effective date of this part]. Note that the purpose of contacting the permitting authority is to determine whether bulk sewage sludge subject to the above requirements has been applied to the site and not to determine the amount of each pollutant applied to the site in bulk sewage sludge.

When results of the above search indicate that bulk sewage sludge subject to the cumulative pollutant loading rates has not been applied to the site, the cumulative amount of each pollutant in Table 2 of section 503.13 of the final regulation can be applied to the site. In this case, the applier must keep a record of the amount of each pollutant in the bulk sewage sludge applied to the site by the applier.

When results of the above search indicate that bulk sewage sludge subject to the cumulative pollutant loading rates has been applied to the site since [insert 120 days after the effective date of this part], the applier must look for the records of the amount of each pollutant applied to the site in bulk sewage sludge since that date. When those records are available, the applier must use that information to determine the additional amount of each pollutant that can be applied to the site so as not to violate the cumulative pollutant loading rate for the pollutant. In this case, the applier must keep the records of the amount of each pollutant applied previously by other appliers and also must keep a record of the amount of each pollutant in the bulk sewage sludge the applier applies to the site. When the records of the amount of each pollutant applied previously cannot be found, an additional amount of each pollutant cannot be applied to the site in bulk sewage sludge because that may violate the cumulative pollutant loading rate for the pollutant.

One purpose of the last part of the fifth general requirement is to ensure that only the permissible total quantity for each pollutant is applied to a site in bulk sewage sludge after [insert 120 days after the effective date of this part]. Without knowing the previous amounts applied, this requirement cannot be met. Note that the requirements to contact the permitting authority and search for records, if appropriate, apply only when bulk sewage sludge subject to the cumulative pollutant loading rates is applied to the land. These requirements do not apply when the bulk sewage sludge that meets the high quality pollutant concentrations in 503.13(b)(3) is applied to the land.

Another purpose of the last part of the fifth general requirement is to prevent two people from applying bulk sewage sludge to the same site without either person knowing the amount of each pollutant listed in Table 2 of section 503.13 that the other person applies to the site in bulk sewage sludge. Under this general requirement, all persons who apply bulk sewage sludge subject to cumulative pollutant loading rates to a site must contact the permitting authority to determine whether bulk sewage sludge subject to that requirement has been applied to a site since [insert 120 days after the effective date of this part].

In the proposed regulation, EPA included requirements for the owner/operator of a treatment works to keep records of the amount of inorganic pollutants applied to each site (54 FR 5745 at 5885). The purpose of that requirement was to ensure that the cumulative pollutant loading rates were not violated at each land application site. The final regulation has the same requirement for the same reason: To ensure no violation of the cumulative pollutant loading rates.

In the final regulation, EPA extended the requirements to keep records of the amount of pollutants applied to a site in bulk sewage sludge to landowners who apply the bulk sewage sludge. This is a logical extension of the need for recordkeeping to prevent violations of the cumulative pollutant loading rates. The availability of the records to new owners of the land (or the prohibition on the application of bulk sewage sludge to a site in its absence) is a necessary measure to protect against exceeding cumulative pollutant loading rates on land application sites.

The sixth general requirement concerns a person who prepares bulk sewage sludge that is applied to the land by a different person. In this case, the person who prepares the bulk sewage sludge (i.e., the generator of the sewage sludge or the person who derives a material from sewage sludge) must provide notice and necessary information to the person who applies the bulk sewage sludge to the land to comply with the part 503 requirements. An example of the information that should be provided is the site restrictions that have to be met when the sewage sludge meets the less stringent Class B pathogen requirements.

The seventh general requirement, which is similar to the sixth general requirement, addresses the situation where the person who prepares sewage sludge provides the sewage sludge to another person who prepares the sewage

sludge (e.g., the person derives a material from the sewage sludge). In this case, the person who prepares the sewage sludge must provide the receiver of the sewage sludge notice and necessary information to comply with the requirements in this part. An example of when this general requirement applies is when a person receives sewage sludge from more than one person who prepares sewage sludge and then derives a material from the sewage sludges, either through mixing of the bulk sewage sludges or some other operation. In this situation, each person who prepares sewage sludge must provide the person who derives the material information (e.g., information on the quality of the sewage sludge) to comply with the requirements in this subpart.

The eighth general requirement requires the applier of the sewage sludge to provide notice and necessary information to the owner or lease holder of the land on which bulk sewage sludge is applied to comply with the requirements in the land application subpart. The land owner or lease holder has to know about requirements for the land application site (e.g., site restrictions when a sewage sludge meeting the less stringent Class B pathogen requirements is applied to the land and management practices) to ensure that those requirements are met. This general requirement ensures that the owner or lease holder of the land receives that information. It only applies, however, when bulk sewage sludge is applied to the land. It does not apply when sewage sludge sold or given away in a bag or other container for application to the land.

The ninth general requirement addresses a notice that must be provided when bulk sewage sludge, except bulk sewage sludge meeting the high quality requirements discussed above, is transported across State lines for land application in another State. When bulk sewage sludge is generated in one State (the generating State) and transferred to another State (the receiving State), the person who prepares the bulk sewage sludge must notify the permitting authority in the receiving State in which the bulk sewage sludge is proposed to be applied. The permitting authority for the receiving State is the EPA Regional Administrator or the State Director of the receiving State when that State has an approved sewage sludge program. Note that there are no approved State sludge programs as of the publication date of part 503.

EPA adopted this requirement so that the permitting authority can determine whether a permit application, or other appropriate oversight, for the land application site is needed. The notice must be given prior to transporting the sewage sludge so that the permitting authority has time to make this determination. Generally, permit applications are not required for land application sites because they are not automatically considered treatment works treating domestic sewage. In a May 2, 1989, notice, EPA stated that "under the Federal program, permits will not be required for owners or operators of land where sludge is beneficially reused such as farm lands and home gardens" (54 FR 18726)). However, the Agency went on to say that Part 122 contains a second part to the definition of treatment works treating domestic sewage that allows the Regional Administrator to designate a facility a treatment works treating domestic sewage "where necessary to protect public health and the environment from poor sludge quality, use, handling, or disposal practices, or to ensure compliance with 40 CFR part 503" (54 FR 18726)). To determine whether a permit, or other appropriate oversight is necessary, the permitting authority must first know that sewage sludge will be applied to a site.

In the proposed regulation, EPA required that the owner/operator of the treatment works to keep the location of the land application site and to submit the location to the permitting authority (54 FR 5745 at 5895). The requirement in this general requirement to notify the permitting authority when sewage sludge is applied to land in a State other than in the State where it is prepared and to provide the permitting authority the location of the land application site is a logical outgrowth of the proposed requirement to provide the permitting authority the location of the land application site.

The notice required by this general requirement is a one-time notification for each applier to any particular land application site. The notice includes information on the approximate time period sewage sludge will be applied to the site to preserve some flexibility as to exactly when sewage sludge will be applied to the site and to allow multiple applications to the same site over a period of time without requiring a separate notice for each application.

In addition to the approximate time period sewage sludge will be applied to a site, the notice must include the location of the site and information on both the person who prepares the bulk sewage sludge and the person who will apply the bulk sewage sludge. The permitting authority may request additional information or a full permit application as noted above. EPA does not expect that many permits will be issued to these land application sites. This notice requirement provides the permitting authority the flexibility to impose additional requirements, if needed, and to ensure compliance with part 503.

The last general requirement also addresses a notice that must be provided. When bulk sewage sludge subject to the cumulative pollutant loading rates is applied to the land, the person who applies the bulk sewage sludge must notify the permitting authority for the State in which the bulk sewage sludge will be applied. This must be done prior to the initial application of bulk sewage sludge to a site by each applier. The purpose of this general requirement is to ensure that a record is kept of the sites where sewage sludge subject to the cumulative pollutant loading rates is applied. Without that information, there is no way for a person who intends to apply bulk sewage sludge to know whether bulk sewage sludge has been applied to a site previously. When it is not known whether bulk sewage sludge subject to cumulative pollutant loading rates has been applied to a site, the cumulative pollutant loading rates in 503.13(b)(2) cannot be enforced. Note that this notice only provides information about whether bulk sewage sludge has been applied to a site. It does not include the amount of each pollutant applied to a site in bulk sewage sludge. Once the person who proposes to apply the bulk sewage sludge determines that bulk sewage sludge subject to cumulative pollutant loading rates has been applied to the site, that person must then contact the previous appliers to determine the amount of each pollutant applied to the site previously in bulk sewage sludge.

The notice required by the last general requirement also is a one-time notice for a land application site for each applier. Information that must be provided in the notice includes the location of the land application site and the name, address, telephone number, and National Pollutant Discharge Elimination System permit number, if appropriate, of the person who will apply the bulk sewage sludge.

Pollutant Limits (Section 503.13)

The final part 503 regulation contains ceiling concentration (Table 1), cumulative pollutant loading rates (Table 2), pollutant concentrations (Table 3), and annual pollutant loading rates (Table 4). Any sewage sludge that does not meet the ceiling concentrations

in Table 1 cannot be applied to the land. Other pollutant limits also are included in 503.13 for bulk sewage sludge and for sewage sludge sold or given away in a bag or other container. Bulk sewage sludge that is applied to the land is subject to cumulative pollutant loading rates if the sewage sludge does not meet the pollutant concentrations for high quality sewage sludge. Sewage sludge sold or given away in a bag or other container is subject to annual pollutant loading rates if it does not meet the pollutant concentrations for high quality sewage sludges.

Ceiling concentrations are included in the final part 503 regulation because EPA is concerned about the potential impact of a "dirty" sewage sludge on public health and the environment (e.g., phytotoxicity to plants). As mentioned above, if the pollutant concentrations in sewage sludge exceed the ceiling concentrations, sewage sludge cannot be applied to the land.

The ceiling concentrations in Table 1 are the less stringent of two values. They are the concentrations calculated using the cumulative pollutant loading rules from the land application exposure assessment, an assumed 100-year site life, and an assumed annual whole sludge application rate of 10 metric tons per year or the 99th percentile concentration from the National Sewage Sludge Survey (NSSS), whichever is less stringent. EPA concluded that when the pollutant concentrations in the sewage sludge do not exceed the ceiling concentrations, the potential for short-term impacts on the environment from land application of the sewage sludge are reduced greatly.

The final part 503 regulation contains two pollutant limits for bulk sewage sludge applied to the land. The first limit for bulk sewage sludge applied to the land consists of cumulative pollutant loading rates. A cumulative pollutant loading rate is the cumulative amount of an inorganic pollutant that can be applied to an area of land. Cumulative pollutant loading rates must be met when bulk sewage sludge that does not meet the pollutant concentrations for high quality sewage sludge is applied to the land.

The final part 503 regulation requires that the cumulative amount of each pollutant listed in Table 2 of section 503.13 from bulk sewage sludge applied to the land shall not exceed the cumulative pollutant loading rate for the pollutant in Table 2. To comply with this requirement, the amount of each pollutant in the bulk sewage sludge applied to a site must be known. Records have to be kept of the amount of each pollutant applied to each site. When the cumulative pollutant loading rate for any of the pollutants in Table 2 of section 503.13 is reached for a site, no more bulk sewage sludge may be applied to that site. The ceiling concentrations and cumulative pollutant loading rates may be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

The following procedure can be used to estimate site life for a bulk sewage sludge with a particular quality and for a certain annual whole sludge application rate (AWSAR) when the cumulative pollutant loading rates are met. When either the quality of the bulk sewage sludge or the AWSAR changes, the site life for the land also changes.

Procedure

1. Measure the concentration of arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc in the bulk sewage sludge.

2. Determine the AWSAR for the bulk sewage sludge. Usually, the AWSAR is equal to the agronomic rate for the bulk sewage sludge.

3. Calculate an annual pollutant loading rate (APLR) for each inorganic pollutant using equation (1) below.

$$APLR = C \times AWSAR \times 0.001 \quad (1)$$

Where:

APLR=Annual pollutant loading rate for an inorganic pollutant in kilograms-pollutant per hectare per 365-day period.

C=Measured pollutant concentration in the bulk sewage sludge in milligrams-pollutant per kilogram of total solids (dry weight basis).

AWSAR=Annual whole sludge application rate in metric tons-sewage sludge per hectare per 365-day period (dry weight basis).

0.001=A conversion factor.

4. Calculate the years an inorganic pollutant can be applied to the land by dividing the cumulative pollutant loading rate in Table 2 of the final regulation by the APLR calculated from Step 3 of this procedure.

5. Determine the lowest number of years calculated in Step 4 of this procedure. This is the period that this bulk sewage sludge can be applied to the land without causing any of the cumulative pollutant loading rates in Table 2 of section 503.13 to be exceeded.

6. This procedure is used only to estimate the number of years a bulk sewage sludge can be applied to a site. This estimate changes when the inorganic pollutant concentrations in the bulk sewage sludge change or when the annual whole sludge application rate changes.

EXAMPLE:

Given:

• Step 1—Pollutant concentrations in bulk sewage sludge (dry weight basis):

Pollutant	Concentration (mg/kg)
Arsenic	10
Cadmium	7
Chromium	990
Copper	761
Lead	134
Mercury	5
Molybdenum	18
Nickel	42
Selenium	5
Zinc	1204

• Step 2—Assume the annual whole sludge application rate for the bulk sewage sludge is 10 MT/ha/365 day period base on agronomic requirements.

• Step 3—Calculate the annual pollutant loading rates for the pollutants using equation (1):

Pollutant	Concentration (mg/kg)	APLR (kg/ha)
Arsenic	10	0.10
Cadmium	7	0.07
Chromium	990	9.90
Copper	761	7.40
Lead	134	1.30
Mercury	5	0.05
Molybdenum	18	0.09
Nickel	42	0.42
Selenium	5	0.05
Zinc	1204	12.00

• Step 4—Calculate the years an inorganic pollutant can be applied to the land:

Pollutant	CPLR (kg/ha)	APLR (kg/ha/yr)	Years (CPLR/APLR)
Arsenic	41	0.10	410
Cadmium	39	0.07	557
Chromium	3000	9.5	303
Copper	1500	7.4	202
Lead	300	1.3	231
Mercury	17	0.05	340
Molybdenum	18	0.09	200
Nickel	420	0.42	1000
Selenium	100	0.05	2000
Zinc	2800	12.0	233

• Step 5—Determine the lowest number of years calculated in Step 4:

For this example, the lowest number of years is 200 for molybdenum. Bulk sewage sludge with the inorganic pollutant concentrations given in Step 1 of this procedure can be applied to the land at an AWSAR of 10 MT/ha for 200 years. After that period, the cumulative pollutant loading rate for molybdenum is exceeded.

The values for the cumulative pollutant loading rates in the final part 503 regulation are different from the values for those rates in the proposal. They are different because values for the input parameters for the models used in the exposure assessment to develop the loading rates were updated using information received during the public comment period on the proposal and other information obtained subsequent

to the proposal. This is discussed in more detail in the land application technical support document.

The second pollutant limit for bulk sewage sludge consists of pollutant concentrations in Table 3 of section 503.13 that designate high quality sewage sludges. These concentrations were called "alternative pollutant limits (APL)" in the November 1990 National Sewage Sludge Survey notice (55 FR 47210, November 9, 1990). The Agency chose not to call the pollutant concentrations "alternative pollutant limits" in the final part 503 regulation because the other pollutant limits in the land application subpart (i.e., cumulative pollutant loading rates) also are alternative limits. Any of the alternative pollutant limits can be met when bulk sewage sludge is applied to the land. The APLs in the 1990 notice are called pollutant concentrations in the final part 503 regulation.

To develop the pollutant concentrations in Table 3 of section 503.13, the cumulative pollutant loading rates for inorganic pollutants established in the land application exposure assessment were converted to annual pollutant loading rates. Next, the calculated annual pollutant loading rates and an assumed annual whole sludge application rate (AWSAR) were used in the following equation to calculate a pollutant concentration:

$$C = \frac{APLR}{AWSAR \times 0.001} \quad (1)$$

Where:

C=pollutant concentration in mg/kg (dry weight basis).

APLR=annual pollutant loading rate in kg-pollutant/hectare/365 day period.

AWSAR=annual whole sludge application rate in metric tons/hectare/365 day period (dry weight basis).

0.001=a conversion factor.

Finally, the pollutant concentrations calculated using equation (1) were compared to the 99th percentile concentration values for the pollutants from the NSSS. The pollutant concentrations in Table 3 of section 503.13 are either the concentration calculated using equation (1) or the 99th percentile concentration, whichever is more stringent. The rationale for the use of the 99th percentile concentration is presented in part VII of today's preamble.

To convert the cumulative pollutant loading rates for inorganic pollutants to annual pollutant loading rates, the Agency assumed that the life of the site where the bulk sewage sludge is applied is 100 years. Annual pollutant loading rates were calculated by dividing the cumulative pollutant loading rates in Table 2 of section 503.13 by 100 years. EPA concluded that using a site life of 100 years is conservative because bulk sewage sludge most likely will not be applied to a site for 100 years, particularly 100 years in a row.

For the purpose of calculating the pollutant concentrations using equation (1), EPA also assumed that the AWSAR is 10 metric tons/hectare/365 day period. This rate is a conservative application rate for agricultural land based on nitrogen requirements of the crop and the nitrogen concentration in the sewage sludge.

Because the annual whole application rates for other types of land differ from the assumed rate for agricultural land, the Agency estimated the site life for the other types of land using the pollutants concentrations in Table 3 of section 503.13 and the different AWSARs in equation (1) above. An annual whole sludge application rate of 26, 18, and 74 metric tons/hectare/365 day period was used for forest, a public contact site, and a reclamation site, respectively. These rates were obtained from the NSSS.

The estimated site lives for a forest, a public contact site, and a reclamation site calculated using the above AWSARs, the pollutant concentration from Table 3 of section 503.13, and the cumulative pollutant loading rates from Table 2 of section 503.13 (i.e., cumulative pollutant loading rate divided by site life) in equation (1) are 38 years, 55 years, and 13 years, respectively. This means that when the pollutant concentrations in the sewage sludge are equal to or less than the concentrations in Table 3 of section 503.13 bulk sewage sludge can be applied to the different types of land at the above application for the above years without causing any of the cumulative pollutant loading rates in Table 2 of section 503.13 to be exceeded. The Agency concluded that it is unlikely that bulk sewage sludge will be applied to a forest for 38 years, to a public contact for 55 years, or to a reclamation site for 13 years. EPA also concluded that bulk sewage sludge will not be applied to those types of land at substantially higher application rates than 26, 18, and 74 metric tons/per hectare/365 day period for a forest, a public contact site, or a reclamation site, respectively, because of the management practice in the land application subpart that requires the sewage sludge to be applied to the land at a rate that is equal to or less than the agronomic rate.

Another reason a 13 year site life for a reclamation site is conservative is that 13 years are not needed to reclaim a site. Available information indicates that, at most, three or four years are needed to reclaim land. This does not mean that sewage sludge cannot be applied to the land after three or four years. It means that after that period, the land is no longer a reclamation site. It becomes a different type of land (e.g., agricultural land). In that case, the part 503 requirements for the other type of land have to be met when sewage sludge is applied to the land after it is reclaimed.

EPA is applying the 99th percentile concentration "cap" to designate high quality sewage sludges because certain parts of the land application subpart (i.e., general conditions and management practices) do not apply when the sewage sludge meets the pollutant concentrations and other requirements. This is the case when the sewage sludge meets the pollutant concentrations in Table 3 of section 503.13, the more stringent Class A pathogen requirements, and one of the appropriate vector attraction requirements.

Using the above approach, the concentration values for three of the pollutants in Table 3 of section 503.13 (i.e., chromium, nickel, and selenium) are "capped" at the 99th percentile value. Concentration values for the other pollutants in Table 3 of section 503.13 are the values for those pollutants calculated using equation (1).

The calculated annual pollutant loading rates for the inorganic pollutants based on a 100 year site life protect public health and the environment from reasonably anticipated adverse effects of pollutants in sewage sludge because they are derived from cumulative pollutant loading rates that provide the same protection. Pollutant concentrations (i.e., the values in Table 3 of section 503.13) based on the calculated annual pollutant loading rates provide equal protection to public health and the environment. In the case of the pollutant concentrations that are "capped", public health and the environment also are protected because those concentrations are more stringent than the pollutant concentrations calculated using equation (1).

Because the pollutant concentrations in Table 3 of section 503.13 are based on conservative site lives and typical AWSARs, the Agency concluded that records do not have to be kept of the amount of each inorganic pollutant in the bulk sewage sludge applied to a site. It is unlikely that any of the cumulative pollutant loading rates in Table 2 of section 503.13 will be exceeded at a site when the bulk sewage sludge applied to

the site meets the pollutant concentrations in Table 3 of section 503.13. The pollutant concentrations in Table 3 of section 503.13 are monthly average concentrations. The monthly average concentration of the pollutant in the sewage sludge that is applied to the land cannot exceed the value for the pollutant in Table 3 of section 503.13.

The Agency considered allowing site-specific cumulative pollutant loading rates to be developed for land application of bulk sewage sludge but decided not to allow that type of pollutant limit for several reasons. First, to develop site-specific cumulative pollutant loading rates, a site-specific exposure assessment has to be conducted. For many of the pathways in the exposure assessment, the terms in the algorithm used to calculate the allowable loading rate are based on policy decisions (e.g., the RfD for a pollutant and the soil ingestion rate). EPA does not believe that values for those terms should be changed in a site-specific assessment. For this reason, when the limiting cumulative pollutant loading rate for a pollutant is based on a pathway for which the algorithm only contains terms based on a policy decision, a site-specific cumulative pollutant loading rate could not be calculated for that pollutant. This is the case for four of the 10 inorganic pollutants for which cumulative pollutant loading rates are included in the land application subpart.

Another reason is the information that must be developed to conduct a site-specific pathway risk assessment. This includes, among other things, pollutant uptake slopes for each crop grown on each site, information on the uptake of a pollutant by a grazing animal for each application site, and variables for the ground-water pathway (e.g., depth to ground water) for each application site. Much of this information is difficult and expensive to obtain, particularly for every land application site.

A third reason the Agency decided not to allow site-specific cumulative pollutant loading rates is that site-specific cumulative pollutant loading rates have to be developed for each land application site. A person who prepares sewage sludge does not just develop one set of site-specific cumulative pollutant loading rates and use those rates for all application sites. Instead, a different site-specific cumulative pollutant loading rate has to be developed for each site. Considering the information that has to be developed to conduct site-specific exposure assessment and the cost to obtain that information, the Agency concluded that it is not feasible to conduct such an assessment for each application site.

The final part 503 regulation also contains two pollutant limits for sewage sludge sold or given away in a bag or other container for application to the land. The first group is the pollutant concentrations designating high quality sewage sludge in Table 3 of section 503.13. If the concentration of any pollutant listed in Table 3 of section 503.13 in the sewage sludge sold or given away in a bag or other container for application to the land exceeds the concentration for the pollutant in Table 3 of section 503.13, the annual pollutant loading rates have to be met.

The annual pollutant loading rates for sewage sludge sold or given away in a bag or other container are presented in Table 4 of section 503.13. The final rule requires that the product of the concentration for each pollutant listed in Table 4 of section 503.13 in sewage sludge sold or given away in a bag or other container for application to the land and the annual whole sludge application rate for the sewage sludge not cause the annual pollutant loading rate for the pollutant in Table 4 of section 503.13 to be exceeded. The procedure used to determine the annual whole sludge application rate for a sewage sludge that does not cause any of the annual pollutant loading rates in Table 4 to be exceeded is presented in appendix A of the final part 503 regulation.

The person who prepares sewage sludge that is sold or given away in a bag or other container has to determine the rate at which the sewage sludge may be applied to the land and not violate any of the cumulative pollutant loading rates in Table 2 of section 503.13. EPA has simplified that decision by calculating an annual pollutant loading rate for each pollutant using conservative assumptions, as discussed below. Using the procedure in appendix A, the person who prepares the sewage sludge calculates the rate that does not cause any of the annual pollutant loading rates in Table 4 of section 503.13 to be exceeded and places that rate on a label or information sheet.

The annual pollutant loading rates in Table 4 of section 503.13 were calculated using the cumulative pollutant loading rates in Table 2 of section 503.13 and an assumed site life of 20 years for the land where the sewage sludge is applied. The Agency concluded that 20 years is a conservative assumption because most likely sewage sludge sold or given away in a bag or other container will be applied to a lawn, a home garden, or a public contact site. EPA does not believe sewage sludge will be applied to those types of land for longer than 20 years, particularly 20 years in a row.

The annual pollutant loading rates in Table 4 of section 503.13 protect public health and the environment from the reasonably anticipated adverse effect of the pollutants in sewage sludge because they are calculated using the cumulative pollutant loading rates in Table 2 of section 503.13. The cumulative pollutant loading rates in Table 2 of section 503.13 are based on the results of the land application exposure assessment.

The final part 503 regulation contains a separate pollutant limit for domestic septage applied to agricultural land, forest, or a reclamation site. This requirement is an annual application rate.

The annual application rate for domestic septage is related to the amount of nitrogen needed by the crop grown on the application site by the following equation:

$$N = ANC \times AAR \times 8.34 \quad (2)$$

Where:

N=pounds of nitrogen needed by the crop per acre per 365 day period.

ANC=available nitrogen concentration in milligrams per liter.

AAR=annual application rate in million gallons per acre per year.

8.34=a conversion factor.

Rearranging equation (2) to solve for the annual application rate results in the following equation:

$$AAR = \frac{N}{ANC \times 8.34} \quad (3)$$

The part 503 regulation requires that the allowable annual application rate for a site be calculated using the following equation, which is equation (3) with a value substituted for ANC×8.34:

$$AAR = \frac{N}{0.0026} \quad (4)$$

The amount of nitrogen, N, needed depends on the crop grown on the land. Values for the amount of nitrogen needed by crops may be obtained from various sources (e.g., Agricultural Extension Services). Once the value for the crop grown on the land is known, that value is divided by 0.0026 to obtain the allowable annual application for a particular site. The amount of nitrogen needed could vary from year-to-year depending on the type of crop grown on the land.

As mentioned above, 0.0026 in equation (4) is the product of an

available nitrogen concentration and a conversion factor (i.e., 8.34/1,000,000). This concentration was calculated using values for Total Kjeldahl Nitrogen (TKN) and ammonia-N in domestic septage obtained from the results of the analysis of nine samples of domestic septage collected in Madison, Wisconsin. In addition, the following assumptions were made to calculate the available nitrogen concentrations:

- Domestic septage is applied to a site every year.
- The domestic septage is injected below the land surface.
- None of the ammonia-N in the domestic septage is lost through volatilization.
- Most of the organic nitrogen (i.e., TKN—ammonia) in the domestic septage becomes available over a three year period. Fifty percent is available the year domestic septage is applied to the land, 20 percent is available in the second year, and 10 percent is available in the third. The remaining organic-N, which was assumed to become available at three percent per year until no more organic-N remains, was not considered in the calculation of the available nitrogen concentration.
- "Steady state" conditions are achieved with respect to the available nitrogen concentration in the third year after application of the domestic septage.

Details for the calculation of the available nitrogen concentration used to calculate the 0.0026 value in equation (4) and the justification that the annual application rate for domestic septage protects public health and the environment from the reasonably anticipated adverse effects of pollutants in domestic septage are presented in the technical support document for the part 503 land application requirements.

EPA chose to limit the annual application rate to domestic septage for two reasons. First, available data indicate that domestic septage has pollutant concentrations that are lower than the pollutant concentrations in commercial/industrial septage (e.g., grease from grease traps). Second, the concentrations in commercial/industrial septage vary greatly. The higher pollutant concentrations and the variability of those concentrations requires that samples of commercial/industrial septage be analyzed periodically to determine the quality of the commercial/industrial septage prior to use or disposal. For these reasons, the annual application rate limit for domestic septage is not appropriate for commercial/industrial septage.

EPA also chose to allow the annual application rate to be used only when domestic septage is applied to agricultural land, forest, or a reclamation site because certain site restrictions are imposed on the site where the domestic septage is applied. EPA's determination is based on the assumption that the applier has control over the application site. Because of the difficulty of imposing site restrictions on a public contact site, a lawn, or a home garden, the Agency is prohibiting the application of domestic septage to a public contact site, a lawn, or a home garden at an annual application rate.

Management Practices (Section 503.14)

Two of the management practices for land application of bulk sewage sludge in the proposed part 503 regulation were deleted from the final part 503 regulation. One of those management practices concerned the limit on the annual amount of bulk sewage sludge that can be applied (i.e., 50 metric tons per hectare). The 50 metric ton per hectare restriction was included in the proposal because the exposure assessment models used to develop the annual pollutant loading rates could not be used for an annual whole sludge application rate greater than 50 metric tons per hectare. Subsequent to the proposal, the models were changed so that application rates greater than 50 metric tons per hectare can be used and protection of public health and the environment is still ensured. For this reason, the 50 metric ton per hectare restriction is no longer needed.

The second management practice no longer found in the land application subpart of the final part 503 regulation concerns crop and access restrictions for pathogen reduction. Those restrictions are now included in subpart D of the final part 503 regulation, which addresses both pathogen and vector attraction reduction.

The following management practices are included in the final part 503 regulation and apply when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site. These management practices do not apply when bulk sewage sludge is applied to a lawn or a home garden because EPA determined that large amounts of bulk sewage sludge will not be applied to a lawn or a home garden for several applications. For this reason, the Agency concluded the management practices are not needed to protect public health and the environment when bulk sewage sludge is applied to a lawn or a home garden. Moreover, the pollutant limits already ensure a high degree of protection. Further, the management practices in many cases have no relevance in a lawn or home garden setting. The following discussion explains the management practices EPA requires when bulk sewage sludge is applied to other than lawns or home gardens.

Part 503 requires that application of sewage sludge to the land is prohibited if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat (§ 503.14(a)). EPA will develop guidance to carry out this provision consistent with the Endangered Species Act.

Bulk sewage sludge cannot be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters of the United States, except as provided in a permit issued pursuant to section 402 or section 404 of the Clean Water Act, as amended. This provision codifies the prohibition in section 405(a) that prohibits disposal of sewage sludge that results in pollutants in the sewage sludge entering navigable waters. This management practice does not prohibit the application of bulk sewage sludge to flooded, frozen, or snow-covered land in all cases. It only prohibits application of bulk sewage sludge to flooded, frozen, or snow-covered land when the bulk sewage sludge enters a wetland or other waters of the United States, except as provided in a section 402 or section 404 permit. EPA did not calculate pollutant limits in this subpart that protect waters of the United States from runoff from flooded, frozen, or snow-covered land on which bulk sewage sludge is applied The Agency's assessment did not model that scenario. Instead, that protection is provided through this management practice.

Section 301 of the CWA includes a prohibition against the discharge of pollutants into wetlands or other waters of the United States, unless in compliance with relevant provisions of the CWA. As mentioned above, section 405(a) of the CWA specifically prohibits discharge of pollutants in sewage sludge into navigable water, except in compliance with a permit issued under section 402. Most point source discharges of dredged or fill material into waters of the United States must be authorized by a permit issued by the U.S. Army Corps of Engineers (COE) under section 404. Other point source discharges of pollutants into waters of the United States must be authorized by a permit issued by EPA or a delegated State under section 402.

At times, it may be difficult to determine whether a particular

pollutant constitutes "fill" material subject to section 404 or a waste product more appropriately regulated under section 402. To provide guidance on this issue, EPA and the COE signed a Memorandum of Agreement Concerning Regulation of Discharges of Solid Waste Under the Clean Water Act (MOA) in 1986 (51 FR 8871, March 14, 1986). For additional guidance on this issue, contact the appropriate EPA Regional wetlands representative.

Another management practice in the land application subpart requires that bulk sewage sludge be applied to the agricultural land, forest, or a public contact site at a rate that does not exceed an agronomic rate. This requirement also applies to a reclamation site, unless the permitting authority authorizes larger amounts of bulk sewage sludge to be applied to a reclamation site.

An agronomic rate is the whole sludge application rate for a bulk sewage sludge designed: (1) To provide the amount of nitrogen needed by the crop or vegetation grown on the land and (2) to minimize the amount of nitrogen in the bulk sewage sludge that passes below the root zone for the crop or vegetation grown on the land to the ground water. The key to the definition is the design of the whole sludge application rate.

Several factors must be considered to design an agronomic rate for a land application site. These include, but are not limited to, the amount of nitrogen needed by the crop or vegetation grown on the land; the amount of organic nitrogen from previous applications of nitrogen-containing materials that becomes available each year; the type of soil at the site; and the geologic conditions of the site. As previously mentioned, the regulation includes a general requirement that requires information needed to determine the agronomic rate be provided to the appropriate person.

Note that the agronomic rate is designed to minimize the amount of nitrogen that passes below the root zone of the crop or vegetation grown on the land to the ground water. This recognizes that some of the nitrogen in the bulk sewage sludge may reach the ground water. However, the Agency concluded that by designing the rate to minimize that amount, long-term contamination of the ground water is not reasonably likely to occur because substantially all of the nitrogen is taken up by the crop or vegetation grown on the land.

The final part 503 regulation also contains one management practice for sewage sludge sold or given away in a bag or other container for application to the land. This management practice requires labelling of the bag or other container in which the sewage sludge is sold or given away or that an information sheet be provided to the person who receives the sewage sludge that is sold or given away in another container. The label or information sheet must contain the name and address of the person who prepares the sewage sludge that is sold or given away, a statement that prohibits application of the sewage sludge to the land except in accordance with the instructions on the label or information sheet, and the application rate for the sewage sludge. The requirements for the label or information sheet are minimum requirements. The person who prepares sewage sludge that is sold or given away in a bag or other container may include additional information on the label or information sheet (e.g., information required by a state or local government).

Operational Standard—Pathogens and Vector Attraction Reduction (Section 503.15)

This section indicates the class of pathogen reduction a sewage sludge must meet when applied to a certain type of land, the pathogen requirements that must be met when domestic septage is applied to agricultural land, a forest, or a reclamation site, and the alternative vector attraction reduction requirements that can be met when sewage sludge is applied to the land. The description of the different pathogen and vector attraction reduction requirements is presented in subpart D of the final part 503 regulation.

The final part 503 regulation requires that bulk sewage sludge applied to agricultural land, forest, a public contact site, or a reclamation site meet either the Class A pathogen requirements or the Class B pathogen requirements. When the sewage sludge is Class B with respect to pathogens, restrictions (e.g., growing of root crops) are imposed on the site where the sewage sludge is applied. Under this approach, the sewage sludge can be treated to reduce pathogens (Class A) or a combination of treatment and environmental attenuation (i.e. Class B with site restrictions) can be used to reduce pathogens. In the judgment of the Administrator of EPA, in either case public health and the environment are protected against the reasonably anticipated adverse effects of pathogens in sewage sludge that is applied to the land.

Bulk sewage sludge applied to a lawn or a home garden must meet the Class A pathogen requirements. The reason for this requirement is that it is not feasible to impose site restrictions on a lawn or a home garden on which bulk sewage sludge is applied. In lieu of having to impose site restrictions, which would be needed if the bulk sewage sludge only meets the Class B pathogen requirements, the bulk sewage sludge has to meet the Class A pathogen requirements. Sewage sludge sold or given away in a bag or other container for application also must meet the Class A pathogen requirements for the same reasons.

When domestic septage is applied to agricultural land, forest, or a reclamation site, either site restrictions (i.e., the same site restrictions that must be met when a Class B sewage sludge is applied to the land) must be met or a pH requirement for the domestic septage has to be met along with site restrictions concerning the harvesting of crops. The first requirement relies on the environment to reduce pathogens during the time that certain activities on the site are restricted. These restrictions prohibit harvesting of crops, grazing of animals, and public access to the site for a certain period. The second requirement relies on treatment of the domestic septage (i.e., pH adjustment) and restrictions on harvesting crops to reduce pathogens. Restrictions on harvesting of crops are part of the second requirement because the Agency does not believe adequate pathogen reduction is achieved by pH adjustment to allow crops to be harvested immediately after applying the domestic septage. These provisions are consistent with the provisions currently in 40 CFR part 257 (Criteria for Classification of Solid Waste Disposal Facilities and Practices) for septic tank pumpings applied to the land.

One of 10 vector attraction reduction requirements also must be met when bulk sewage sludge is applied to the agricultural land, forest, a public contact site, or a reclamation site. These requirements are designed to reduce the characteristics of the sewage sludge that attract vectors such as rats, mosquitos, and flies. In the judgment of the EPA, any of the 10 alternative vector attraction requirements protect public health and the environment from the reasonably anticipated adverse effects of the characteristics in sewage sludge that attract vectors. Note that the vector attraction requirement is in addition to the pathogen requirement discussed above. Both requirements must be met.

One of the first eight vector attraction reduction requirements for bulk sewage sludge applied to agricultural land, forest, a public contact site, or a reclamation site must be met when bulk

sewage sludge is applied to a lawn or a home garden. Injection of sewage sludge below the land surface and incorporation sewage sludge into the soil cannot be used to achieve vector attraction reduction in these cases. Implementation of these requirements for bulk sewage sludge applied to a lawn or a home garden would be difficult, if not impossible. For this reason, these alternative are not available for achieving vector attraction reduction when bulk sewage sludge applied to a lawn or a home garden.

One of the first eight vector attraction reduction requirements for bulk sewage sludge applied to agricultural land, forest, a public contact site, or a reclamation site also must be met when sewage sludge is sold or given away in a bag or other container for application to the land. Again, in this situation it is not feasible to inject the sewage sludge below the land surface or to incorporate the sewage sludge into the soil.

Vector attraction reduction is achieved when domestic septage is applied to agricultural land, forest, or a reclamation site when the domestic septage is injected below the surface of the land, incorporated into the soil after being applied to the land surface, or the pH of the domestic septage is raised to 12 or higher and remains at 12 or higher for 30 minutes. When vector attraction reduction is achieved by raising the pH of the domestic septage, each container (e.g., each tank truck load) of domestic septage that is applied to the land must be monitored to demonstrate compliance with that requirement. Again, these provisions are consistent with those for septic tank pumpings in 40 CFR part 257.

Frequency of Monitoring (Section 503.16)

The final part 503 regulation contains the frequency of monitoring requirements for pollutant concentrations in sewage sludge and for compliance with the pathogen density and certain vector attraction reduction requirements. Frequency of monitoring requirements, which also are included in the subparts on surface disposal and incineration, are needed to make the part 503 regulation self-implementing.

The frequency of monitoring requirements in this subpart for pollutant concentrations, pathogen density requirements, and vector attraction reduction requirements vary with the amount of bulk sewage sludge used or disposed annually. In the case of sewage sludge sold or given away in a bag or other container for application to the land, the frequency of monitoring requirements are based on the amount of sewage sludge received by the person who prepares the sewage sludge that is sold or given away in a bag or other container.

The amount of sewage sludge used or disposed was chosen as the unit of measurement on which the frequency of monitoring is based because the requirements in the final part 503 regulation apply to sewage sludge that is used or disposed. The amounts in the frequency table are based on dry weight because all of the pollutant limits in the final part 503 regulation are on a dry weight basis.

Before the derivation of the frequencies of monitoring is discussed, one other aspect of the frequencies needs to be addressed. This concerns the lowest range for the frequencies of monitoring (i.e., greater than zero but less than 290 metric tons per 365-day period). This range indicates that when sewage sludge is not used or disposed during a 365-day period, the sewage sludge does not have to be monitored for the requirements in the part 503 regulation. The sewage sludge must be monitored only when an amount is used or disposed.

The amount of sewage sludge used or disposed in the frequency of monitoring requirements is related to the flow rate for the treatment works. For example, the range of "greater than 290 metric tons per 365-day period to equal to or less than 1,500 metric tons per 365-day period" corresponds to a wastewater flow rate range of "greater than one MGD to equal to or less than five MGD". The Agency made various assumptions concerning the influent and effluent five-day biochemical oxygen demand and total suspended solids wastewater concentrations; the percent removal for total suspended solids in the primary clarifier; the percent removal of five-day biochemical oxygen demand through secondary treatment; the percent fixed solids in the sewage sludge in the influent to the stabilization process; and the percent volatile solids removed in the sewage sludge stabilization process to calculate the amount of sewage sludge used or disposed. Details of these calculations are presented in the technical support document for the part 503 land application requirements.

The final part 503 regulation allows the permitting authority to reduce the frequency of monitoring for pollutant concentrations and the pathogen density requirements for enteric viruses and viable helminth ova in 503.32(a)(5)(ii) and 503.32(a)(5)(iii), respectively, after monitoring for two years at the frequency in the final part 503 regulation. However, in no case should the frequency of monitoring be less than once per year when sewage sludge is applied to the land. Requiring the sewage sludge to be monitored at least once per year when sewage sludge is applied to the land is consistent with the frequency of monitoring requirement in EPA's state sludge management program requirement regulation (i.e., 40 CFR 501.15(b)(10)).

In deciding whether to reduce the frequency of monitoring, the permitting authority should consider the variability of the pollutant concentrations, the magnitude of the pollutant concentrations, and the frequency of detection of enteric viruses and viable helminth ova in the sewage sludge. The Agency concluded that data collected over a two-year are adequate to calculate the variability of pollutant concentrations and to determine the magnitude of the pollutant concentrations before deciding whether to change the frequency of monitoring.

As mentioned above, the frequency of monitoring for the pathogen density requirements in 503.32(a)(5)(ii) and 503.32(a)(5)(iii) may be reduced. These requirements address enteric viruses and viable helminth ova, respectively, in sewage sludge. As part of those requirements, the sewage sludge must be analyzed for enteric viruses and viable helminth ova every time the sewage sludge is monitored. After those two organisms are found in the influent to the pathogen treatment process and after the required reduction for those organisms is demonstrated through the pathogen treatment process, the sewage sludge does not have to be monitored for enteric viruses and viable helminth ova when values for the process operating parameters are consistent with the documented values for those parameters. Because the costs and complexity of the analytical methods for enteric viruses and viable helminth ova, the Agency decided to allow the permitting authority to judge whether to reduce the frequency of monitoring after monitoring at the frequency in the final part 503 regulation for two years. The Agency concluded that two years of monitoring should provide enough information to make that judgment. Note that the potential reduction in frequency of monitoring applies only to the pathogen density reduction requirements for enteric viruses and viable helminth ova mentioned above. The frequency of monitoring cannot be reduced for the other pathogen density requirements.

The final part 503 regulation requires that every container of domestic septage applied to agricultural land, forest, or a reclamation site be monitored to determine compliance with the pH

adjustment requirement when that requirement is met. Every container (e.g., each tank truck load applied to the land) must be monitored because there is no way to ensure that the domestic septage in each container meets the pH requirement by monitoring domestic septage in only a certain number of containers.

Recordkeeping (Section 503.17)

The final part 503 regulation contains recordkeeping requirements for: (1) Bulk sewage sludge that meets the pollutant concentrations for high quality sewage sludge in 503.13(b)(3), the more stringent Class A pathogen requirements in 503.32(a), and one of vector attraction reduction requirements in 503.33(b)(1) through 503.33(b)(8); a bulk material derived from sewage sludge that meets those three requirements; and sewage sludge sold or given away in a bag or other container for application to the land that meets those three requirements; (2) bulk sewage sludge applied to the land that does not meet the above requirements; (3) sewage sludge sold or given away in a bag or other container for application to the land that does not meet the above requirements; and (4) domestic septage applied to agricultural land, forest, or a reclamation site. Recordkeeping requirements are included in the final regulation to make the regulation self-implementing.

The recordkeeping requirements for bulk sewage sludge and sewage sludge sold or given away in a bag or other container for application to the land specify the information that must be developed, the person who must develop and retain the information, and the period that the information must be retained. The information that must be developed varies depending on which pollutant limits are met and on which pathogen and vector attraction reduction requirements are met. This information is needed to show that the requirements in this subpart are met.

The recordkeeping requirements for domestic septage applied to agricultural land, forest, or a reclamation site also specify the information that must be developed, the person who develops and retains the information, and the period the information has to be retained. This information indicates whether the requirements in this subpart for domestic septage are met.

The person who develops and retains the information for bulk sewage sludge that meets the pollutant concentrations for high quality sewage sludges in 503.13(b)(3), the more stringent Class A pathogen requirements in 503.32(a), and one of the vector attraction requirements in 503.33(b)(1) through 503.33(b)(8); a material derived from bulk sewage sludge that meets those requirements; or sewage sludge sold or given away in a bag or other container that meets those requirements is the person who prepares the sewage sludge. That person may be the treatment works or some other person.

The persons who develop and keep the information for bulk sewage sludge that does not meet the above requirements and is applied to agricultural land, forest, a public contact site, a reclamation site, a lawn, or a home garden are the person who prepares the bulk sewage sludge and the person who applies the bulk sewage sludge to the land. The person who prepares the bulk sewage sludge must develop certain information (e.g., pollutant concentrations in the sewage sludge) and the applier must develop other information (e.g., the record of the amount of each pollutant applied to the land). Those persons may be the treatment works, an agent of the treatment works, a private contractor, or some other person.

An example of when the person who prepares the bulk sewage sludge does not develop and keep the information is when the bulk sewage sludge meets the pollutant concentrations for high quality sewage sludge in 503.13(b)(3) and the less stringent Class B pathogen requirements. In those situations, the person who applies the bulk sewage sludge to the land must develop information concerning certain part 503 requirements (e.g., the restrictions on the application site). The Agency concluded that the person who applies the bulk sewage sludge to the land is the appropriate person to develop that information and keep the records.

For sewage sludge sold or given away in a bag or other container for application to the land, the recordkeeping responsibility lies with the person who prepares the sewage sludge that is sold or given away in a bag or other container for application to the land. For domestic septage applied to agricultural land, forest, or a reclamation site, the responsible person is the one who applies the domestic septage to those types of land.

The period that information must be retained varies depending on which pollutant limits are met. In most cases (including the requirements for domestic septage), the time is five years (i.e., the usual period for a NPDES permit). However, when cumulative pollutant loading rates are met, records for certain information have to be retained indefinitely. The reason for this requirement is that a cumulative pollutant loading rate is the cumulative amount of an inorganic pollutant that can be applied to the land. To know how much of an inorganic pollutant has been applied to the land in bulk sewage sludge, a record must be retained indefinitely.

Reporting (Section 503.18)

The final part 503 regulation requires that Class I sludge management facilities, POTWs with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more to report the information developed in the recordkeeping section, except the information developed and retained by an applier, to the permitting authority once every 365 day period. Class I sludge management facilities, POTWs with a design flow rate equal to or greater than one million gallons, and POTWs that serve 10,000 people or more must report the information on cumulative pollutant loading rates, which is developed and retained by the applier, when 90 percent or more of any of the cumulative pollutant loading rates are reached at a site. The Agency chose only to require Class I sludge management facilities, POTWs with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more to report information to the permitting authority. This was done because Class I sludge management facilities are either a publicly owned treatment works (POTW) required to have a pretreatment program or a treatment works treating domestic sewage (TWTDS) that has the potential to affect public health and the environment adversely because of the TWTDS's sewage sludge use or disposal practice.

Pretreatment POTWs are POTWs that receive industrial wastewater and, thus, are more likely to generate sewage sludge that contains the pollutants controlled in the final part 503 regulation. For this reason, the Agency concluded that those POTWs should report the information on sewage sludge use or disposal to the permitting authority at least once every 365 days. The reporting requirement also applies to TWTDS for the same reason they are classified as a Class I facility (i.e. the potential of the TWTDS's sewage sludge use or disposal practice to affect public health and the environment adversely).

The reporting requirement applies to POTW's that are not a Class I facility and either have a design flow rate equal to or greater than one million gallons per day or serve 10,000 people or more because of the potential for those POTWs to have industrial wastewater in

the influent to the POTW. Sewage sludge generated at those POTW's is more likely to have the pollutants controlled in the part 503 regulation. For this reason, the Agency concluded those POTWs also should report the information in the recordkeeping section to the permitting authority.

Surface Disposal (Subpart C)

This part of today's preamble discusses the part 503 requirements for surface disposal of sewage sludge. More details on these requirements can be found in the technical support document for the part 503 surface disposal requirements.

Applicability (Section 503.20)

The applicability section indicates that this subpart contains requirements for a person who prepares sewage sludge that is placed on a surface disposal site, the owner/operator of the surface disposal site, sewage sludge placed on a surface disposal site, and a surface disposal site. Sewage sludge is placed on an active sewage sludge unit for final disposal, not for treatment, storage, or to condition the soil or fertilize crops grown in the soil.

This subpart does not apply to sewage sludge stored or treated on the land or to the land on which the sewage sludge is stored or treated. As indicated above, sewage sludge is placed on an active sewage sludge unit for final disposal, not for storage or treatment.

This subpart also does not apply to sewage sludge that remains on the land for longer than two years when the person who prepares the sewage sludge demonstrates that the land on which the sewage sludge remains is not an active sewage sludge unit. The demonstration must explain why sewage sludge needs to remain on the land for longer than two years prior to final disposal and must discuss the approximate period the sewage sludge will be used or disposed. In addition, the person who prepares the sewage sludge must retain the information required for the demonstration for the period that the sewage sludge remains on the land. Note that the person who prepares the sewage sludge does not have to report the information in the demonstration unless requested to do so by the permitting authority.

The purpose of allowing sewage sludge to remain on the land for a period longer than two years and not having to meet the requirements in this subpart apply is to address unique situations. In such a situation, mitigating factors may justify the longer period. Without mitigating factors, EPA concluded that a two year period provides enough time to store sewage sludge for most purposes prior to final use or disposal.

Special Definitions (Section 503.21)

Definitions for the following terms are included in this subpart of the final part 503 regulation: Active sewage sludge unit, aquifer, contaminate an aquifer, cover, displacement, fault, final cover, holocene time, leachate collection system, liner, lower explosive limit for methane gas, qualified ground water scientist, seismic impact zone, sewage sludge unit, sewage sludge unit boundary, surface disposal site, and unstable area. The following discussions provide additional information on some of these definitions.

Active sewage sludge unit. An active sewage sludge unit is a sewage sludge unit that is not closed. This definition is included in the final part 503 regulation because requirements in the regulation differ for a sewage sludge unit that is active and a sewage sludge unit that is closed. To distinguish between the two sewage sludge units, the term active sewage sludge unit is used.

Aquifer. An aquifer is a geologic formation, a group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs. This definition parallels the definition found in the current regulation controlling disposal of sewage sludge on the land in 40 CFR part 257. It is included in the final part 503 regulation because of the requirement in the regulation not to contaminate an aquifer.

Contaminate an aquifer. Contaminate an aquifer means to introduce a substance that causes the maximum contaminant level (MCL) for nitrate in 40 CFR 141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in ground water to increase when the existing concentration of nitrate in the ground water already exceeds the maximum contaminant level for nitrate in 40 CFR 141.11. This definition is included in the final part 503 regulation because the regulation requires that sewage sludge placed on an active sewage sludge unit shall not contaminate an aquifer. Note that this requirement only applies to nitrate. The limits for the pollutant controlled in the surface disposal subpart in part 503 are designed not to cause the maximum contaminant level for the pollutants to be exceeded in the ground water. For this reason, monitoring of the ground water for these pollutants is not necessary.

Cover. Cover is soil or other material used to cover sewage sludge placed on an active sewage sludge unit. The purpose of the cover is to reduce the attraction of vectors to the sewage sludge after the sewage sludge is placed on the surface disposal site.

Holocene time: Holocene time is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present. The most recent epoch of the Quaternary period covers approximately the last 11,000 years.

Leachate collection system. A leachate collection system is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit. This definition assumes that a sewage sludge unit has a liner. It is included in the final part 503 regulation because the regulation contains a management practice that requires the leachate to be collected and disposed in accordance with the applicable requirements when the sewage sludge unit has a liner and leachate collection system.

Liner. A liner is soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less. The liner retards the downward movement of liquid by limiting the rate at which the liquid moves to 1×10^{-7} centimeters per second or less.

Lower explosive limit for methane gas. The lower explosive limit for methane gas is the lowest percentage of methane gas and air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure. This definition is included in the final part 503 regulation because of the requirement for air in any structures within a surface disposal site and air at the property line of the surface disposal site not to exceed a percentage of the lower explosive limit or the lower explosive limit, respectively.

Qualified groundwater scientist. A qualified groundwater scientist is an individual qualified to make sound professional judgments regarding groundwater monitoring, pollutant fate and transport, and corrective action. This definition is included in the final part 503 regulation because if a certification is provided to demonstrate an aquifer is not contaminated, the certification must be made by a qualified groundwater scientist.

Sewage sludge unit. A sewage sludge unit is land on which only sewage sludge is placed for final disposal. Land does not include waters of the United States, as defined in 40 CFR 122.2. When sewage sludge is placed on the land for either treatment or storage, the land is not a sewage sludge unit.

A sewage sludge unit does not include land where sewage sludge is applied to condition the soil or to fertilize crops or vegetation grown on the land. Using sewage sludge for these purposes is land application. In those cases, the requirements in subpart B (Land Application) must be met.

Sewage sludge unit boundary. The sewage sludge unit boundary is the outermost perimeter of the sewage sludge unit. This is different from the property line of the surface disposal site. This definition is needed because part 503 requires that the distance from the sewage sludge unit boundary to the surface disposal site property line be known.

Surface disposal site. A surface disposal site is a discrete area of land that contains one or more active sewage sludge units. This definition is needed because some of the requirements in this subpart apply to a surface disposal site. Other requirements in this subpart apply to active sewage sludge units in a surface disposal site.

Unstable area. An unstable area is area of land subject to natural or human-induced forces that may damage the structural components of an active sewage unit. An example of an unstable area is an area subject to earthquakes.

General Requirements (Section 503.22)

Several of the general requirements in this subpart proposed for the part 503 regulation were deleted from the final rule. They are discussed below.

The proposed regulation contained a requirement that a surface disposal site comply with National Pollutant Discharge Elimination System (NPDES) permit requirements in addition to the requirements in this subpart. The part 503 regulation does not apply to activities subject to a NPDES permit at a surface disposal site other than those that relate to the placement of sewage sludge on an active sewage sludge unit. For this reason, the proposed general requirement concerning compliance with other NPDES requirements was deleted from the final regulation. EPA notes, however, that section 405(e) prohibits the disposal of sewage sludge when it results in pollutants from the sewage sludge entering navigable waters, except in compliance with an NPDES permit.

The general requirement in the proposed regulation concerning a hazard to human health, wildlife, land, or water resources because of sewage sludge in the runoff from a base flood was deleted from the final part 503 regulation. The Agency concluded that the management practice in this subpart of the final part 503 regulation that requires the runoff from an active sewage sludge unit for a 24-hour, 25-year storm event be collected and disposed in accordance with the applicable requirements protects surface waters adequately. Similarly, as noted above, section 405(a) already prohibits the discharge of pollutants to navigable waters, except under certain circumstances.

The general requirement in this subpart of the proposal concerning a hazard to aircraft from birds was deleted from the final regulation. That general requirement was included in the proposal because of the vector attraction potential of sewage sludge placed on an active sewage sludge unit. The final regulation contains a requirement to reduce the vector attraction of sewage sludge before the sewage sludge is placed on an active sewage sludge unit or to cover the sewage sludge unit daily to reduce vector attraction. For this reason, this general requirement is no longer needed.

The general requirement in the proposed regulation concerning reduction of the temporary water storage capacity of a floodplain by a surface disposal site was deleted from the final regulation because that requirement is addressed by a management practice in the final part 503 regulation. The management practice requires that an active sewage sludge unit not restrict the flow of a base flood.

By definition, a floodplain is the lowland and relatively flat area inundated by a base flood. Not reducing the temporary water storage capacity of a floodplain means not reducing the temporary storage capacity of the area inundated by the base flood. This is the same as not restricting the flow of a base flood. Because these two requirements address the same issue, the general requirement in the proposal concerning not reducing the temporary storage capacity of a floodplain was deleted from the final regulation. As mentioned above, the requirement not to restrict the flow of a base flow is a management practice in the final part 503 regulation.

The requirements in the proposed regulation concerning threatened or endangered species, restriction of the flow of a base flood, seismic impact zone, distance from a fault or fracture, location in a wetland, and runoff from a 24-hour, 25-year storm event are classified as management practices rather than general requirements in the final part 503 regulation.

The final part 503 regulation contains four general requirements for placement of sewage sludge on a surface disposal site. The first requirement is that no person shall place sewage sludge on a surface disposal site unless the requirements for the sewage sludge and for the surface disposal site in this subpart are met. EPA concluded that, in most cases, the person who places sewage sludge on a surface disposal site will be a treatment worker. However, they may be some situations where some other person places sewage sludge on a surface disposal site. This general requirement applies to any person who places sewage sludge on a surface disposal site.

The second general requirement concerns active sewage sludge units that must close. This requirement applies to an active sewage sludge unit located within 60 meters of a fault or stress fracture with displacement in Holocene time; located in an unstable area; or located in a wetland, except as provided in a permit issued pursuant to either section 402 or 404 of the CWA, as amended. The Agency concluded that to protect public health and the environment from reasonably anticipated adverse effects of pollutants in sewage sludge, no additional amount of sewage sludge should be placed on those active sewage sludge units and that those active sewage sludge units should close by [insert one year after the effective date of this part], unless, in the case of an active sewage sludge unit located within 60 meters of a fault or stress fracture with displacement in Holocene time, otherwise specified by the permitting authority. The permitting authority may conclude after further review that an active sewage sludge unit located within 60 meters of the above fault or stress fracture need not close. One year was chosen for the time period within which the above active sewage sludge units should close because that is the compliance period for the final part 503 regulation specified in section 405(d) of the Clean Water Act, as amended.

The third general requirement in this subpart is that the owner/operator of an active sewage sludge unit must submit a written closure and post closure plan to the permitting authority 180 days prior to the date that the active sewage sludge unit closes. The plan must discuss how the active sewage sludge unit will be closed. Also included in this general requirement is the minimum information that should be included in the closure plan.

The last general requirement in this subpart of the final regulation requires the owner of the surface disposal site to provide written notification to the subsequent owner of the surface disposal site. That notification must indicate that sewage sludge was placed on the land. EPA concluded that the

subsequent owner of a surface disposal site should know that sewage sludge was placed on the land so that they can become aware of any requirements that result from placement of sewage sludge on the land (e.g., to monitor methane gas for three years after the last active sewage sludge unit in a surface disposal unit closes).

Pollutant Limits—Other Than Domestic Septage (Section 503.23)

Pollutant limits in the final part 503 regulation for sewage sludge (other than domestic septage) placed on a surface disposal site are expressed as pollutant concentrations. The pollutant concentrations protect public health and the environment from reasonably anticipated adverse effects of arsenic, chromium, and nickel in the sewage sludge. These pollutants were identified by the Agency as pollutants that affect public health and the environment adversely when sewage sludge is placed on a surface disposal site. The final rule does not establish pollutant limits for organic pollutants and some inorganic pollutants for which the Agency proposed pollutant limits. An explanation of why limits are not established in the final regulation for those pollutants are presented in the technical support document for the part 503 surface disposal requirements.

There are no pollutant limits in this subpart for domestic septage placed on an active sewage sludge unit because the Agency concluded they are not needed to protect public health and the environment when domestic septage is placed on an active sewage sludge unit. This is discussed further in the technical support document for the part 503 surface disposal requirements.

When an active sewage sludge unit does not have a liner and leachate collection system, the allowable pollutant concentrations in the sewage sludge are presented in Table 1 of section 503.23 in the final regulation. Pollutant concentrations in Table 1 of section 503.23 are based on the results of an exposure assessment for the ground-water and vapor pathways. For the ground-water pathway, the assessment assumes that the MCL for a pollutant is not exceeded 150 meters from the boundary for the active sewage sludge unit. The 150-meter distance is the distance used in the model for the ground-water exposure assessment for active sewage sludge units.

The final part 503 regulation requires that the actual distance from the active sewage sludge unit boundary to the surface disposal site property line be used to determine the allowable concentration for each pollutant listed in Table 1 of section 503.23. This applies when (1) an active sewage sludge unit does not have a liner and leachate collection system and (2) the active sewage sludge unit boundary is less than 150 meters from the property line of the surface disposal site. When the actual distance is less than 150 meters, the allowable pollutant concentrations may be different. Table 2 of section 503.23 contains the concentration for the pollutants for different unit boundary to property line distances.

The final part 503 regulation includes an alternative to the pollutant concentrations discussed above for an active sewage sludge unit that does not have a liner and leachate collection. When requested by the owner/operator of a surface disposal site at the time of permit application, site-specific pollutant limits may be developed under the final regulation for an active sewage sludge unit without a liner and leachate collection system if the existing values for site parameters specified by the permitting authority are different from the values for those parameters used to develop the pollutant limits in Table 1 of section 503.23. In addition, the permitting authority must determine that site-specific pollutant limits are appropriate for the active sewage sludge unit. An important aspect of these conditions is that the permitting authority will specify the site parameters that can be used to develop a rationale for site-specific pollutant limits. Examples of the site parameters are depth to ground water and soil type.

If the permitting authority agrees that site-specific pollutant limits are appropriate, the limits must be based on the results of a site-specific assessment, as specified by the permitting authority, or must be equal to the existing concentration of the pollutant in the sewage sludge that will be placed on the active sewage sludge unit. The lower of the above two values shall be the limit for the pollutant that cannot be exceeded in the sewage sludge.

When an active sewage sludge unit has a liner and leachate collection system, the liner retards the movement of pollutants in sewage sludge to the ground water. Results of the ground-water pathway exposure assessment for an active sewage sludge unit with a liner and leachate collection system indicate that, because of the impact of the liner, sewage sludge with essentially an unlimited concentration of the inorganic pollutants can be placed on the active sewage sludge unit. The liner ensures that the inorganic pollutants do not reach the ground water. For this reason, there are no pollutant limits for arsenic, cadmium, chromium, copper, lead, mercury, and nickel for an active sewage sludge unit with a liner and leachate collection system in the final part 503 regulation. There also are no pollutant limits for organic pollutants for sewage sludge placed on an active sewage sludge unit with a liner and leachate collection system in part 503 because all organic pollutants were deleted from the final part 503 regulation.

Management Practices (Section 503.24)

The management practices for a surface disposal of sewage sludge in the proposed part 503 regulation are included in the final part 503 regulation with some editorial changes. In addition, several new management practices were added to the final regulation.

The final regulation provides that placement of sewage sludge on an active sewage sludge unit is prohibited if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat (§ 503.24(a)). EPA will develop guidance to carry out this provision consistent with the Endangered Species Act.

The second management practice requires that an active sewage sludge unit not restrict the flow of a base flood. A base flood is a flood that has a one percent chance of occurring in any given year (i.e., a flood with a magnitude equalled once in 100 years). Thus, an active sewage sludge unit cannot restrict the flow in an area that carries the 100-year flood. This management practice reduces the potential for the area that carries the 100-year flood to experience problems related to the location of the surface disposal site (e.g., restriction of the flow) in that area. It also protects the surface disposal site and sewage sludge placed on active sewage sludge units from the impacts of a base flood.

Flood insurance rate maps (FIRM) developed by the Federal Emergency Management Agency (FEMA) should be used to determine whether an active sewage sludge unit is located in an area that carries the base flood (i.e., the 100-year floodplain). FEMA has developed maps for approximately 99 percent of the flood-prone communities in the United States. Other sources of information on the 100-year floodplain include the U.S. Army Corps of Engineers, the Soil Conservation Service, the National Oceanic and Atmospheric Administration, the U.S. Geologic Survey, the Bureau of Land Management, the Bureau of Reclamation, the Tennessee Valley

Authority, and State and local flood control agencies.

The third management practice requires that an active sewage sludge unit be designed to withstand the maximum recorded horizontal ground level acceleration when an active sewage sludge unit is located in a seismic impact zone. One purpose of this management practice is to protect the foundation of an active sewage sludge unit from cracks caused by ground motion that could lead to collapse of the active sewage sludge unit. Maps depicting the potential seismic activity in the United States at a constant probability are available from the U.S. Geological Survey.

The fourth management practice requires that an active sewage sludge unit be located 60 meters or more from a fault that has displacement in Holocene time, unless otherwise specified by the permitting authority. The Holocene is a geologic time, known as an epoch, that extends from the end of the Pleistocene to the present (approximately the last 11,000 years).

Geologic evidence indicates that faults that moved in recent times (i.e., during the last 11,000 years) are most likely to move in the future. Faults that moved in Holocene time are easier to identify and date than are older faults because this epoch produced recognizable geological deposits. The U.S. Geological Survey mapped the location of Holocene faults in the United States in 1978. Maps of identified Holocene faults in the United States also are available from the States of California and Nevada.

EPA is prohibiting the location of an active sewage sludge unit within 60 meters of a Holocene fault, unless otherwise specified by the permitting authority, because results of studies suggest that most of deformation takes place within that distance. Effects of the deformation decrease rapidly as distance from the fault increases. The permitting authority may allow an active sewage sludge unit to be located within 60 meters of a Holocene fault after concluding that public health and the environment are protected if an active sewage sludge unit is located within that distance. This is consistent with the approach taken in 40 CFR part 258 for municipal solid waste landfills.

The fifth management practice requires that an active sewage sludge unit not be located in an unstable area. An unstable area is an area of land subject to natural or human-induced forces that may damage the structural components of the active sewage sludge. The purpose of this management practice is to protect the structural components (e.g., the foundation) of an active sewage sludge unit from forces that could damage the components. For example, when the foundation of an active sewage sludge unit fails, sewage sludge could be released and cause harm to the environment. This also is the reason that part 503 regulation requires that an active sewage sludge unit located in an unstable area close within one year of the effective date of the regulation.

To determine whether an area is unstable, the following factors should be considered, among other things: (1) Soil conditions that cause differential settling; (2) geologic or geomorphologic features such as areas prone to mass movement, Karst terrains, or fissures; (3) surface areas weakened by the withdrawal of oil, gas, or water; and (4) other features that indicate protective measures cannot be designed to withstand a natural event such as a volcanic eruption.

The management practice concerning not locating an active sewage sludge unit in an unstable area replaces the general requirement in the proposed part 503 regulation concerning location of an active sewage sludge unit in areas where adequate support exists for the structural components of the sewage sludge unit. The Agency concluded that the management practice and general requirement provide the same protection. For this reason, there in no need to have both requirements in the final part 503 regulation.

Editorial changes were made to the management practice concerning location of an active sewage sludge unit in a wetland. The final part 503 regulation requires that an active sewage sludge unit not be located in a wetland, except as provided in a permit issued pursuant to either section 402 or 404 of the CWA, as amended.

Editorial changes also were made to the management practice concerning runoff from a 24-hour, 25-year storm event. These changes clarify that the 24-hour, 25-year storm event is from a storm with a frequency of occurrence of 25 years and that the collection system must have the capacity to handle run-off from the 24-hour, 25-year storm event. The runoff from this storm event must be collected and disposed in accordance with National Pollutant Discharge Elimination System permit requirements and any other applicable requirements. This management practice protects surface waters from pollutants in the run-off. The surface water pathway was not evaluated in the exposure assessment used to develop the pollutant limits for sewage sludge placed on a surface disposal site.

The Agency chose the 24-hour, 25-year storm event for this management practice to be consistent with the requirements for hazardous waste landfills in 40 CFR 264.301(g) and the requirements for municipal solid waste landfills in 40 CFR 258.26(a)(2). Both of these provisions require that runoff from the 24-hour, 25-year storm event be collected and controlled. For the final part 503 regulation, control of the runoff means disposed in accordance with the applicable requirements.

Water that runs on an active sewage sludge unit was considered during the development of the pollutant concentrations for the ground-water pathway in the surface disposal exposure assessment. For this reason, part 503 does not have a requirement concerning water that runs on an active sewage sludge unit.

Other management practices in the final part 503 regulation address collection and treatment of leachate, concern for the build-up of methane gas in the air inside a structure within a surface disposal site and in the air at the property line of a surface disposal site, growing of crops, grazing of animals, restricting public access to a surface disposal site, and contamination of an aquifer. These are discussed below.

As mentioned above, because a liner retards the movement of pollutants in sewage sludge to the ground water, results of the ground-water pathway analysis for an active sewage sludge unit with a liner and leachate collection system indicate that sewage sludge with essentially an unlimited concentration of inorganic pollutants can be placed on an active sewage sludge unit that has a well-maintained liner and leachate collection system. For this reason, there are no pollutant limits for inorganic pollutants for an active sewage sludge unit with a liner and leachate collection system. The liner insures that the inorganic pollutants do not reach the ground water.

The part 503 regulation requires that the leachate collection system for a sewage sludge unit with a liner and leachate collection system be operated and maintained for the period that the sewage sludge unit is active and for three years after the sewage sludge unit closes. This management practice ensures that the leachate collection system is operated and maintained. Because the Agency has no pollutant limits for an active sewage sludge unit that has a liner and leachate collection system, protection of ground water obviously depends on proper operation of the unit, including the leachate collection system, to prevent pollutant build-up and in the event of liner

failure, a treat to ground water. EPA chose to require that the leachate collection system be operated and maintained for three years after the sewage sludge unit closes because that is the period that the leachate has to be collected. This is discussed further below.

The final regulation requires that the leachate from a sewage sludge unit that has a liner and leachate collection system be collected and disposed in accordance with the applicable requirements for the period the sewage sludge unit is active and for three years after the sewage sludge unit closes. This management practice is included in the final part 503 regulation to prevent damage to the liner caused by hydraulic pressure from the leachate. The pressure is reduced when the leachate is collected and removed from the active sewage sludge unit.

The three-year period after a sewage sludge unit closes during which leachate has to be collected and disposed is based on the period that methane gas must be monitored after a sewage sludge unit closes. This is discussed further below.

The final part 503 regulation contains a management practice that addresses the explosive potential of methane gas generated in a sewage sludge unit. Methane gas is generated in a sewage sludge because of the anaerobic conditions in the sewage sludge unit that result when the sewage sludge is covered. For this reason, the management practice concerning methane gas applies when a cover is placed on an active sewage sludge unit (e.g., to control vectors). When an active sewage sludge unit is not covered, the requirement to monitor methane gas does not apply.

The methane gas management practice protects public health from the explosive potential of methane gas generated during the stabilization of sewage sludge after placement on a sewage sludge unit. This is done by limiting the percent of methane gas in the air in any structure within the property line of the surface disposal site and by limiting the percent of methane gas in the air at the property line of the surface disposal site. The value for the percent of methane gas in the air in any structure within the property line of the surface disposal site is 25 percent of the lower explosive limit for methane gas, which is the lowest percent by volume of methane gas in air that propagates a flame at 25 degrees Celsius and atmospheric pressure. The value for the percent of methane gas in the air at the property line of a surface disposal site is the lower explosive limit for methane.

Methane gas also must be monitored for three years after a sewage sludge unit closes when a final cover is placed on the sewage sludge unit, unless otherwise specified by the permitting authority. This period is based on results of a study titled "Pilot Scale Evaluation of Sludge Landfilling—Four Years of Operation" conducted in 1987 by EPA's Water Research Engineering Laboratory in Cincinnati, Ohio. In this study, sewage sludge was placed in simulated landfill cells and methane production was monitored for three years and seven months. Results of this study indicate that methane production for the sewage sludge, which had been stabilized in an anaerobic digester, leveled off after approximately two years. Because the study was a laboratory simulation instead of a field study, the Agency decided to increase to the period that air must be monitored for methane gas after a sewage sludge unit closes to three years. The 10 year period for monitoring methane gas in the proposed part 503 regulation was not used in the final part 503 regulation because EPA concluded that a three year period is adequate to protect public health and the environment based on results of EPA's research. The Agency concluded that for sewage sludge that has been stabilized through either anaerobic or aerobic digestion, the 10-year period is not required.

As mentioned above, the period that methane gas must be monitored after a sewage sludge unit closes is three years, unless specified otherwise by the permitting authority. An example of when a longer monitoring period may be necessary is when a sewage sludge that has not been treated in either an anaerobic or aerobic process (e.g., a lime stabilized sewage sludge) is placed in the sewage sludge unit. In this case, the potential for methane gas generation for periods longer than three years exists. For this reason, the permitting authority may extend the period that the air in structures within a surface disposal site and at the property line of the surface disposal site must be monitored for methane gas.

Other management practices in this subpart of the final regulation address growing of crops, grazing of animals, restricting public access to a surface disposal site, and contamination of an aquifer. Unless authorized by the permitting authority, a food crop, a feed crop, and a fiber crop cannot be grown on an active sewage sludge unit. The exposure assessment on which the pollutant limits for surface disposal are based did not consider growing crops on the land where the sewage sludge is placed. This management practice protects public health and the environment by prohibiting the growing of food, feed, and fiber crops. However, in certain circumstances, the permitting authority may authorize the owner/operator of a surface disposal site to grow food crops, feed crops, and fiber crops on an active sewage sludge unit when alternative requirements (i.e., management practices) are imposed to protect public health and the environment.

The management practices concerning animals grazing on an active sewage sludge unit and public access restrictions are included in the final regulation because grazing of animals and exposure of the public to sewage sludge placed on the active sewage sludge unit (e.g., ingestion of the sewage sludge/soil mixture) were not considered in the exposure assessment used to develop the pollutant limits for surface disposal. These management practices are required, consequently, to protect public heath and the environment. In the case of grazing animals, the permitting authority may allow animals to graze on an active sewage sludge unit when the owner/operator of the surface disposal unit demonstrates that through management practices (e.g., monitor the concentration of the pollutants in animal products) public health and the environment are protected from any reasonably anticipated adverse effects of pollutants in sewage sludge when animals grazed.

Public access to a sewage sludge unit must be restricted for the period the sewage sludge unit is active and for three years after the sewage sludge unit closes. The three year period was chosen to parallel the period that air must be monitored for methane gas at a closed sewage sludge unit that receives a final cover. As mentioned above, the reason for this management practice is that the exposure assessment for the surface disposal pollutant limits did not consider contact by the public with the sewage sludge placed on an active sewage sludge unit (e.g., ingestion of the sewage sludge/soil mixture). Protection for the public is provided by restricting access to the active sewage sludge unit. In addition, this management practice keeps the public away from an area where the potential for explosions from methane gas exists (i.e., when a final cover is placed on the sewage sludge unit.

The last management practice is that the owner/operator of a surface disposal site must demonstrate that the sewage sludge does not contaminate an aquifer after placement on an active sewage sludge unit. The owner/operator may

demonstrate compliance in one of two ways. Compliance may be demonstrated through a ground-water monitoring program. Alternatively, the owner/operator may demonstrate compliance through the certification of a qualified ground-water scientist that an aquifer is not contaminated.

When the owner/operator chooses to demonstrate compliance through ground-water monitoring, EPA recommends that the owner/operator develop a formal ground-water monitoring plan. Such a plan should include the following elements: (1) A description of the location of the active sewage sludge unit; (2) a description of the ground-water monitoring system, including the number, spacing, and depths of the monitoring wells; (3) a description of how the existing level of nitrate in the ground water was determined; and (4) the frequency of sampling, sampling protocol, and sample analytical methods.

In the preamble to the proposed part 503 rule, EPA explained its approach for regulating monofills (i.e., surface disposal sites in the final part 503 regulation). EPA stated that the proposal modified and expanded the approach used in the "Criteria for Classification of Solid Waste Disposal Facilities and Practice," 40 CFR part 257. The part 257 regulation, issued under the joint authority of section 4004 of the Research Conservation and Recovery Act and section 405 of the Clean Water Act, among other things, contained a general prohibition (257.3–4) on the contamination of an underground drinking water source beyond the solid waste boundary specified in accordance with the requirements of the rule.

In the proposed part 503 rule, the Agency adopted a prevention rather than containment approach for the proposed standards for sewage sludge disposed in a monofill (i.e., surface disposal site in the final part 503 regulation). As EPA explained, this approach builds on the ground-water protection concept by establishing limits for sewage sludge on a pollutant-by-pollutant basis to ensure that the concentration of the pollutant reaching the ground water does not cause the MCL for a pollutant or other appropriate standard to be exceeded in the ground water. EPA concluded that controlling pollutants at the source was more protective and equitable to prevent sewage sludge contamination of the ground water. The proposed part 503 rule established pollutant concentration limits for 16 pollutants when sewage sludge is disposed in a monofill.

The final part 503 regulation promulgated today for sewage sludge disposed in a surface disposal site is based on the approach in the proposed part 503 rule. Based on available scientific and technical information, EPA concluded that when the pollutant concentrations in today's rule are not exceeded, the probability is small that pollutants in the sewage sludge placed on a surface disposal site will migrate to the ground water, especially at levels that cause the MCLs to be exceeded in the ground water. Consequently, the part 503 standards for surface disposal sites replace 40 CFR part 257 requirements for sewage sludge disposed on a surface disposal site, except for nitrate.

In the proposed part 503 rule, EPA requested comment on whether EPA should retain the generic prohibition on contamination of the ground water provided in part 257 as an additional protective measure and check on the efficacy of the pollutant-specific sewage sludge pollutant limits. EPA concluded that retention of the prohibition in part 257 is generally not required because the Agency has identified the pollutants that present the greatest potential for adversely affecting public health and the environment when sewage sludge is placed on active sewage sludge units. These pollutants were evaluated and assessed for determining the appropriate standards promulgated here today. However, one pollutant for which EPA has established an MCL that numerous commenters suggested may present a problem for ground-water contamination was not evaluated: Nitrate. For this pollutant, EPA decided to retain the general prohibition in part 257 on contamination of underground drinking water sources (i.e., contaminate an aquifer). The last general requirement in the surface disposal subpart incorporates the existing requirement in part 257 prohibiting nitrate contamination.

As explained above, EPA adopted a preventive policy in establishing today's surface disposal standards, which are designed to ensure that contamination of the ground water does not occur. For this reason, the part 503 rule does not require ground-water monitoring to establish the absence of contamination and, if and when contamination of the ground water is identified, does not require corrective action to clean up the ground water or to take other measures to protect public health and the environment. The proposed part 503 rule had requested comment on whether ground-water monitoring and corrective action should back-stop EPA's pollution prevention approach.

Since EPA first proposed the sewage sludge use or disposal standards, EPA has developed a formal statement of ground-water protection principles in a document titled "Protecting the Nation's Ground Water: EPA's Strategy for the 1990s" (EPA Publication 21Z–1020, July 1991). This policy addresses approaches to preventing contamination and clean-up of contaminated ground water, including early detection monitoring and recognition of the primary role of States in ground water protection. The policy concludes that development of a "Comprehensive State Ground Water Protection Program" (CSGWPP) is the most coherent current approach to draw together the many Federal ground water protection authorities administered by States and to implement these programs in a more effective, efficient and coordinated manner. At this time, EPA is in the process of preparing detailed guidance for CSGWPPs under various Federal legislative statutes addressing water quality management and ground water protection. As envisioned, under a CSGWPP, States will develop and implement ground-water protection programs tailored to their unique hydrogeologic settings and institutional arrangements, including establishing priorities for uses of ground water for drinking water supply and ecological sustainability.

At the present time, 25 States have already adopted Wellhead Protection Programs under the Safe Drinking Water Act to protect wellhead areas within their jurisdiction from contaminants that may have an adverse effect on public health. Some of these programs may include various control measures, including siting restrictions on the location of facilities. Additionally, approximately 30 States have, or are in the process of developing, a system for categorizing State ground water by use or vulnerability. EPA expects that the policies adopted in the Wellhead Protection Programs and State classification systems will be incorporated in the CSGWPPs. EPA urges those contemplating disposal of sewage sludge on surface disposal sites to contact their State authorities to determine any restrictions under State Wellhead Protection Programs or State ground-water classification schemes (or the State CSGWPP when developed) that may impose further limitations on either the siting or operation of surface disposal sites.

The standards EPA has adopted today, as noted above, include certain restrictions on the siting of surface disposal sites to protect ground water. In Round Two, EPA will consider whether also to include in the surface disposal standards an explicit requirement to comply with either State

siting, ground-water monitoring or other requirements that are part of a State's Wellhead Protection Program or applicable State CSGWPP.

Pathogens and Vector Attraction Reduction (Section 503.25)

The pathogen requirements in the final part 503 regulation for sewage sludge (other than domestic septage) placed on active sewage sludge unit are similar to the existing requirements for the disposal of sewage sludge on the land in 40 CFR part 257. Sewage sludge (other than domestic septage) placed on a surface disposal site must meet either the Class A pathogen requirements in 503.32(a) or the Class B pathogen requirements in 503.32(b), except the site restrictions in 503.32(b)(5), unless a cover is placed on the active sewage sludge unit at the end of each operating day. When a daily cover is placed on an active sewage sludge unit, the sewage sludge does not have to meet a separate pathogen requirement. The daily cover isolates the sewage sludge and allows the environment to reduce the pathogens in the sewage sludge.

The site restrictions in 503.33(b)(5) do not have to be met when the sewage sludge meets the Class B pathogen requirements because site restrictions are already imposed on an active sewage sludge unit for other than pathogen reduction. Management practices that already address site restrictions are included in this subpart because, as previously mentioned, the exposure assessment for the surface disposal pollutant limits did not address activities such as growing of crops, grazing of animals, and exposure to the sewage sludge by the public.

Domestic septage placed on a surface disposal site does not have to meet a specific pathogen requirement. The existing requirements in part 257 for septic tank pumpings indicate that septic tank pumpings applied to the land must be treated in a Process to Significantly Reduce Pathogens (PSRP) or restrictions concerning grazing of animals and access by the public must be imposed on the site where the domestic septage is applied. Because site restrictions for those two activities, as well as a restriction on the growing of crops, are imposed on all active sewage sludge units for other than pathogen reduction, the part 257 site restrictions for applying domestic septage to the land are met at every active sewage sludge unit. For this reason, domestic septage placed on an active sewage sludge unit does not have to meet an additional pathogen requirement.

The vector attraction reduction requirements in the final part 503 regulation also are similar to the part 257 vector attraction reduction requirements for sewage sludge disposed on the land. Part 257 requires that the sewage sludge be covered daily or that other appropriate techniques be used to reduce vector attraction. The final part 503 regulations requires that 1 of 10 vector attraction reduction requirements (i.e., "other techniques") be met when sewage sludge (other than domestic septage) is placed on an active sewage sludge unit or that daily cover be placed on the active sewage sludge unit. When daily cover is placed on an active sewage sludge unit, the sewage sludge does not have to meet a separate pathogen requirement. The daily cover prevents access to the sewage sludge by vectors.

Vector attraction reduction is achieved when domestic septage is placed on a surface disposal site when the domestic septage is injected below the land surface, incorporated into the soil, or the pH of the domestic septage is raised to a certain level and remains at that level for 30 minutes (i.e., "other techniques"), or when the active sewage sludge unit receives a daily cover. The "other techniques" for domestic septage are limited to injection, incorporation, and pH adjustment because the Agency does not believe that "other techniques" available for sewage sludge (e.g., volatile solids reduction and percent moisture) are feasible for each container of domestic septage placed on an active sewage sludge unit. When daily cover is placed on an active sewage sludge unit, access to domestic septage placed on the unit by vectors is prevented.

Frequency of Monitoring (Section 503.26)

The final part 503 regulation contains the frequency of monitoring requirements for pollutants in sewage sludge (other than domestic septage) placed on an active sewage sludge unit, pathogen density requirements, and vector attraction reduction requirements. The permitting authority may establish more stringent frequency of monitoring requirements, if necessary. The frequency of monitoring for sewage sludge placed on an active sewage sludge unit is based on the amount of sewage sludge placed on an active sewage sludge unit annually. Calculation of the amounts of sewage sludge in the various ranges in table 1 of section 503.26 is discussed in the section on land application in this preamble. The calculations also are discussed in the technical support document for the part 503 surface disposal requirements.

The final part 503 regulation also allows the permitting authority to reduce the frequency of monitoring for pollutants and for the pathogen density requirements in 503.32(a)(5)(ii) and 503.32(a)(5)(iii) after two years of monitoring at the frequencies in table 1 of 503.26. In deciding whether to reduce the minimum frequency of monitoring, the permitting authority shall consider, among other things, the variability of the pollutant concentrations over the two years, the magnitude of the pollutant concentrations, and the frequency of detection of enteric viruses and viable helminth ova in the sewage sludge. Note that only the permitting authority can reduce the frequency of monitoring.

As mentioned above, the frequency of monitoring for the enteric viruses density requirements in 503.32(a)(5)(ii) and the viable helminth ova density requirements in 503.32(a)(5)(iii) may be reduced. The reasons the Agency concluded the frequency of monitoring for these requirements may be reduced are discussed in the section on land application in this preamble.

The final part 503 regulation requires that each container (e.g., each tank truck load) of domestic septage placed on a surface disposal site be monitored for pH when vector attraction reduction is achieved by raising the pH of the domestic septage. Each container must be monitored because there is no other way to know whether the domestic septage meets the pH requirement.

The final regulation also requires that methane gas in all structures within a surface disposal site and at the property line of the surface disposal site be monitored continuously under certain situations. For this reason, the frequency of monitoring for methane gas for those situation is continuously.

Recordkeeping (Section 503.27)

The final part 503 regulation contains recordkeeping requirements for sewage sludge (other than domestic septage) and for domestic septage placed on a surface disposal site. The person who prepares the sewage sludge must develop certain information (e.g., the concentration of pollutants in the sewage sludge) and retain the information for five years. In addition, the owner/operator of a surface disposal site also must develop certain information (e.g., a certification that the management practices for an active sewage sludge unit are met) and retain that information for five years.

When domestic septage is placed on an active sewage sludge unit, the person

who applies the domestic septage must develop certain information and the owner/operator of the surface disposal site must develop certain information. In both cases, the information has to be retained for five years.

Recordkeeping requirements are included in this subpart because the regulation is self-implementing (i.e., the requirements apply even when a person does not receive a permit). Without the requirement to keep records, there is no way to demonstrate that the part 503 requirements are met.

Reporting (Section 503.28)

The part 503 regulation requires Class I sludge management facilities, POTWs with a design flow rate equal to or greater than 1 million gallons per day, and POTWs that serve 10,000 people or more to report the information developed in 503.27(a) for sewage sludge (other than domestic septage) to permitting authority once every 365 days. Only Class I sludge management facilities, POTWs with a design flow rate equal to or greater than 1 million gallons per day, and POTWs that serve 10,000 people or more must report information for the reasons discussed in the land application section in today's preamble.

Pathogens and Vector Attraction Reduction (Subpart D)

This section of the preamble discusses pathogen and vector attraction reduction requirements in the final part 503 regulation for sewage sludge that is applied to the land or placed on an active sewage sludge unit. More details on these requirements may be obtained from the technical support document for the part 503 pathogen and vector attraction reduction requirements.

Scope (Section 503.30)

This subpart in the final part 503 regulations establishes the requirements that must be met for a sewage sludge to classified either Class A or Class B with respect to pathogens and the alternative vector attraction reduction requirements. Either the Class A or Class B pathogen requirements must be met and one of the alternative vector attraction reduction requirements must be met when sewage sludge is applied to the land or placed on a surface disposal site. The circumstance under which either the Class A or Class B requirements must be met (e.g., sewage sludge sold or given away in a bag or other container for application to the land must meet the Class A requirements) is addressed in the part 503 subparts on land application (subpart B) and surface disposal (subpart C).

This subpart also contains site restrictions that must be met when a Class B sewage sludge is applied to the land and the pathogen requirements for domestic septage applied to agricultural land, forest, or a reclamation site. As discussed previously, there are no pathogen requirements in the final part 503 regulation for domestic septage placed on a surface disposal site.

Special Definitions (Section 503.31)

Five of the 11 special definitions in this subpart in the proposed regulation were deleted from the final part 503 regulation. Also, six new definitions were added to the final part 503 regulation and editorial changes were made to the definitions in the proposal that are included in the final regulation. Definitions for the following terms are in the final regulation: aerobic digestion, anaerobic digestion, density of microorganisms, land with a high potential for public exposure, land with a low potential for public exposure, pathogenic organisms, pH, specific oxygen uptake rate, total solids, unstabilized solids, vector attraction, and volatile solids. The definitions that were deleted from and added to the final regulation are discussed below.

The terms "food crops" and "feed crops" are defined in the general definitions in the final regulation. For this reason, the definitions for those terms are not included in this subpart of the final regulation.

The term "indicator organism" is not used in the final part 503 regulation. For this reason, the definition of indicator organism was deleted from the final regulation.

Pathogen reduction was defined in the proposed regulation as the elimination or reduction of pathogenic bacteria (*Salmonella* sp.), protozoa, viruses, and helminth ova in sewage sludge. This definition was deleted from the final regulation because the pathogen requirements in the final regulation are not expressed in terms of quantity of pathogen reduction. They are expressed in terms of values that cannot be exceeded in the sewage sludge.

In the proposed regulation, the pathogen requirements were expressed in terms of per gram of volatile suspended solids. Comments on the proposal indicated that those requirements should be expressed in terms of total solids because volatile suspended solids change in the sewage sludge during treatment. The Agency agrees with the comments and is expressing the pathogen requirements in the final regulation in terms of per gram of total solids (dry weight basis). Because the term "volatile suspended solids" is not used in the final regulation, the definition for that term was deleted from the final part 503 regulation.

The final part 503 regulation includes a definition for land with a high potential for public exposure because the site restrictions for a Class B sewage sludge that is applied to the land differ depending on the potential exposure of the public to the land. Land with a high potential for public exposure is land used frequently by the public. This includes, but is not limited to, parks, ball fields, and a reclamation site located in a populated area (e.g., a construction site). This type of land has a stringent public access restriction (i.e., one year) when a Class B sewage sludge is applied to the land.

Land with a low potential for public exposure is land used infrequently by the public. This includes, but is not limited to, agricultural land and forest. The Agency does not believe that the public will use these types of land frequently. Note that the public does not include people who apply the sewage sludge to the land or farm workers.

The final part 503 regulation also includes a definition of pathogenic organisms. Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

The definition of total solids is in the final regulation because, as mentioned above, the requirements for pathogenic organisms in sewage sludge are expressed in terms of per gram of total solids in the sewage sludge. Total solids are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

The final part 503 regulation includes the definition of unstabilized solids because two of the vector attraction reduction requirements in the final regulation depend on whether the sewage sludge that is used or disposed of contains unstabilized solids. Unstabilized solids are organic materials in sewage sludge that have not been decomposed biochemically or have been treated only with chemicals (e.g., lime stabilized).

Pathogens (Section 503.32)

There are several differences between the pathogen requirements in the proposed part 503 regulation and the pathogen requirements in the final regulation. These changes are discussed below.

The first change concerns the pathogen requirement for protozoa in the proposal. Protozoa are no longer included as one of the organisms subject to pathogen requirements because of the lack of an analytical method for protozoa. In addition, EPA concluded that protozoa are unlikely to survive wastewater treatment and sewage sludge treatment processes and, thus, should not cause a reasonably anticipated adverse effect in sewage sludge that is used or disposed of.

Second, the unit of measurement for density of pathogenic organisms was changed for volatile suspended solids to total solids. As mentioned previously, several commenters stated that the use of volatile suspended solids is not appropriate because the volatile suspended solids concentration changes significantly when the sewage sludge is treated. The Agency agrees and changed the unit of measurement to total solids.

A third change is not expressing the fecal coliform requirements in terms of a log reduction. Several commenters on the proposed regulation stated that requiring a log reduction may not protect public health and the environment. For example, reducing the fecal coliform from a log of 6 (i.e., 1,000,000) to a log of 4 (i.e., 10,000) is a two log reduction. A reduction for log of 4 (i.e., 10,000) to log of 2 (i.e., 100) also is a two log reduction. The final fecal coliform density is different, however, for each example (10,000 versus 100). The Agency agrees with the commenters and eliminated the log reduction requirement in the final part 503 regulation. Instead, the final regulation requires that the density of fecal coliform in the sewage sludge be equal to or less than a specific value.

Another change is the elimination of the requirement to reduce fecal streptococci in the sewage sludge. EPA concluded that the use of fecal coliform is sufficient to indicate the presence of pathogenic organisms in the sewage sludge. A requirement for both fecal streptococci and fecal coliform is redundant. Fecal coliform was selected for the final part 503 regulation because an analytical method exists for fecal coliform and because treatment works conduct fecal coliform analyses routinely.

One of the major changes in the pathogen requirements in the final regulation is that the regulation only has two classes of pathogen requirements instead of the three classes in the proposed regulation. Several commenters indicated that the requirements in the proposal for Class B and Class C are essentially the same. The Agency agrees with the commenters and only included Class A and Class B pathogen requirements in the final regulation. Changes also were made to the Class A and Class B pathogen requirements and to the site restrictions when a Class B sewage sludge is applied to the land.

The final regulation requires that the Class A pathogen requirements be met either prior to or at the same time certain vector attraction reduction requirements are met. Typically, after the Class A pathogen requirement is met, the sewage sludge is left without an adequate density of predator or competitive organisms to compete with pathogenic bacteria such as *Salmonella* sp. bacteria. As a result, regrowth of pathogenic bacteria in the sewage sludge will occur if a small number of those bacteria survive treatment or when bacteria are introduced into the sewage sludge inadvertently. When vector attraction reduction precedes treatment for pathogens, regrowth of the pathogenic bacteria can occur. When vector attraction reduction occurs after treatment for pathogens, competitive organisms are re-introduced into the sewage sludge during vector attraction reduction and regrowth of pathogenic bacteria is inhibited.

The above requirement does not apply when the vector attraction requirement concerning adjustment of sewage sludge pH is met. In that case, alkali material used to raise the pH remains in the sewage sludge after treatment. This material inhibits growth of pathogenic bacteria even when the density of predator or competitive organisms is too low to resist regrowth of the bacteria. For this reason, the order of vector attraction reduction and pathogen treatment is not relevant when the vector attraction reduction requirement is met by raising the pH of the sewage sludge to 12 or higher with alkali addition and, without the addition of more alkali, the pH of the mixture remains at 12 or higher for two hours and then remains at 11.5 or higher for an additional 22 hours.

The above requirement concerning the order of pathogen reduction also does not apply when vector attraction reduction is achieved by drying the sewage sludge to the specified percent solid values. In this case, EPA concluded that re-growth of *Salmonella* sp. bacteria is not a problem.

The requirement to reduce pathogens either prior to or at the same time as vector attraction is reduced applies only to a sewage sludge that meets the Class A pathogen requirements. A Class B sewage sludge usually has an adequate density of predator and competitive organisms even when the vector attraction reduction requirement is met before the Class B pathogen requirement is met.

The final part 503 has six alternative requirements that can be met for a sewage sludge to be classified Class A with respect to pathogens. Each alternative requirement is discussed below.

The objective of the alternative pathogen reduction requirements is to protect public health and the environment from the reasonably anticipated adverse effects of pathogens in sewage sludge that is used or disposed. The Agency concluded that the best way to meet that objective is for the sewage sludge that is used or disposed to meet certain pathogen density requirements and for that sewage sludge to meet other pathogen density requirements at the time of use or disposal. Sewage sludge generated at every treatment works and each material derived from sewage sludge should be analyzed for pathogens to show that the density of pathogenic organisms in the sewage sludge or material derived from sewage sludge are below the specified value.

The first Class A pathogen alternative in the final part 503 regulation is based on raising the temperature of the sewage sludge to a specific value and keeping the temperature at that value for a specific time. *Salmonella* sp. bacteria, enteric viruses, and viable helminth ova in the sewage sludge are expected to be reduced to acceptable levels (i.e., to below detectable levels) when the temperature and time requirements are met.

For the final part 503 regulation, the temperature and time requirements vary depending on the percent solids in the sewage sludge. When the percent solids is equal to or greater than seven percent and the sewage sludge is not heated by warmed gases or an immiscible liquid, the temperature must be 50 degrees Celsius or higher and the time period must be 20 minutes or longer. The temperature and time period are determined using equation (2) in the final regulation. The 20 minute minimum time period helps ensure uniform heating is achieved throughout the sewage sludge.

When the percent solids in the sewage sludge is equal to or greater than seven percent and the sewage sludge is heated by warmed gases or an immiscible liquid, the temperature must be 50 degrees Celsius or higher and the time period must be 15 seconds or longer. The temperature and time period in this case also are determined using equation (2) in the final regulation. Sewage sludge heated in this manner usually is

in the form of small droplets or particles (e.g., less than one millimeter in diameter) that are dispersed throughout the gas or liquid. Because of this small size, uniform heating can be achieved in a short time at a high temperature.

When the percent solids of the sewage sludge is less than seven percent and the sewage sludge is heated for 15 seconds or longer, but for less than 30 minutes, the temperature and time are determined using equation (2). Uniform heating of this sewage sludge is achieved under these conditions.

When the percent solids of the sewage sludge is less than seven percent, the temperature of the sewage sludge is 50 degrees Celsius or higher, and time period is 30 minutes or longer, the temperature and time period are determined using equation (3) in the final regulation. The Agency concluded that uniform heating of sewage sludge that has a percent solids of less than seven can be achieved at lower temperatures for shorter times. The lower percent solids allows the heat to be dispersed throughout the sewage sludge in a shorter time and not as much heat (i.e., high temperature) is needed to ensure that the temperature of the solids in the sewage sludge is raised to an adequate level.

To use the temperature and time equations, either the temperature at which the sewage sludge will be maintained or the time the temperature will be maintained has to be known. The known value is then used in the appropriate equation to obtain the other value.

In addition to the temperature and time requirements, this alternative requires that either the density of fecal coliform in the sewage sludge or the density of *Salmonella* sp. bacteria in the sewage sludge must be below a specific value at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land, or at the time the sewage sludge is prepared to meet the requirements in 503.10 concerning sewage sludge that is not subject to the general requirements and management practices in the land application subpart. This insures that *Salmonella* sp. bacteria do not regrow in the sewage sludge subsequent to when the temperature of the sewage sludge is raised to the specific level for the specific period. EPA will provide more guidance on the terms "at the time of use or disposal", "at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land", and "at the time the sewage sludge is prepared to meet the requirements in 503.10 concerning sewage sludges not subject to the general requirements and management practices in the land application subpart".

The Agency concluded that when the temperature of the sewage sludge is raised to the value determined using equation (2) or equation (3) and maintained at that value for the specified period, the densities of *Salmonella* sp. bacteria, enteric viruses and viable helminth ova in the sewage are reduced to below detectable levels. Because enteric viruses and viable helminth ova are not expected to regrow over time, there is no requirement in this Class A alternative to measure the density of those organisms in the sewage sludge after the temperature and time requirements are met.

The second alternative in the final part 503 regulation for a sewage sludge to classified Class A with respect to pathogens also requires that the density of fecal coliform or the density of *Salmonella* sp. bacteria in the sewage sludge be below a specified level at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land, or at the time the sewage sludge is prepared to meet the requirements in 503.10 concerning the exemption of the sewage sludge from the general requirements and management practices in the land application subpart. This requirement ensures that *Salmonella*, sp. bacteria does not regrow in the sewage sludge between the time the sewage sludge is treated and the time the sewage sludge is used or disposed.

In addition to the regrowth requirement, the second Class A alternative requires that the pH of the sewage sludge that is used or disposed be raised to above 12 and remain above 12 for 72 hours. During at least 12 hours of the 72-hour period, the temperature of the sewage sludge has to be greater than 52 degrees Celsius. At the end of the 72-hour period, the sewage sludge must be air dried to achieve a percent solids of greater than 50 percent. When these requirements are met, the Agency concluded that the density of *Salmonella*, sp. bacteria, enteric viruses, and viable helminth ova in the sewage sludge are reduced to below detectable levels.

The requirements in Alternative 2 are a generic description of a process that has been classified a Process To Further Reduce Pathogens (PFRP) by EPA. Because that process has already been classified a PFRP (i.e., a process that produces a Class A sewage sludge), the Agency concluded that sewage sludges that meet these requirements should be classified Class A. For this reason, this Class A alternative was added to the final part 503 regulation.

The third alternative in the final regulation for a sewage sludge to be classified Class A with respect to pathogens also addresses the regrowth issue by requiring that the density of either fecal coliform or *Salmonella*, sp. bacteria in the sewage sludge be below a specified value at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land, or at the time the sewage sludge is prepared to meet the requirements in 503.10 concerning sewage sludge not subject to the general requirements and management practices in the land application subpart. In addition, this alternative requires that the sewage sludge be monitored for enteric viruses and viable helminth ova prior to being treated in a pathogen process. The number of times the sewage sludge must be monitored for those microorganisms varies, as discussed below.

As mentioned above, enteric viruses must be monitored in the sewage sludge in the influent to the pathogen treatment process during each monitoring episode for the sewage sludge. When enteric viruses are not found in influent (i.e., the density of enteric viruses is less than one Plaque-forming Unit per four grams of total solids), the sewage sludge is Class A with respect to enteric viruses until the next monitoring episode for the sewage sludge.

When the density of enteric viruses in the influent to the pathogen treatment process is equal to or greater than one Plaque-forming Unit per four grams of total solids, the density of the enteric viruses in the sewage sludge that is used or disposed (i.e., after the pathogen treatment process) must be below one Plaque-forming Unit per four grams of total solids. In addition, values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement must be documented. At this time, the sewage sludge is Class A with respect to enteric viruses.

For the sewage sludge to continue to be Class A with respect to enteric viruses, the values for the process operating parameters must be consistent with the values documented above at all times. Although the term "consistent with" allows the actual values for the operating parameter to be different from the documented values for the operating parameters, the Agency does not expect

there will be a large variation in those values.

The approach discussed above for enteric viruses also is part of this alternative for viable helminth ova. The sewage sludge is Class A with respect to viable helminth ova when viable helminth ova are not found (i.e., less than one per four grams of total solids) in the influent to the pathogen treatment process. When viable helminth ova are found in the influent, the density of viable helminth ova in the sewage sludge that is used or disposed must be less than one per four grams of total solids and the operating parameters for the pathogen treatment process must be documented for the sewage sludge to be Class A with respect to viable helminth ova. After the viable helminth ova reduction is demonstrated, values for the process operating parameters must be consistent with the documented values for those parameters for the sewage sludge to continue to be classified Class A with respect to viable helminth ova.

Alternative 3 is designed to reduce the analytical costs for pathogenic organisms after pathogen reduction is demonstrated for the pathogen treatment process. The Agency concluded that after pathogen reduction is demonstrated for a process, the effluent from the process (i.e., the sewage sludge that is used or disposed) does not have to be monitored for the pathogenic organisms as long as the process operating parameters are consistent with the documented values. This is similar to the temperature and time requirement in Alternative 1. In Alternative 1, as long as the temperature and time requirement is met, pathogens are reduced to acceptable levels. In this alternative, when the values for operating parameters are consistent with the documented values after pathogen reduction is demonstrated, enteric viruses and viable helminth ova are reduced to below detectable levels.

The Agency recognizes that, under this alternative, the sewage sludge may have to be analyzed for enteric viruses and viable helminth ova during each monitoring episode when enteric viruses and viable helminth ova are never found in the influent to the pathogen treatment process. The Agency also recognizes that the analyses for these organisms are costly and that only a limited number of laboratories can perform those analyses. For these reasons, the permitting authority may reduce the frequency of monitoring for those organisms in the final part 503 regulation after two years of monitoring at the specified frequency. In deciding whether to reduce the frequency of monitoring for those two microorganisms in the influent to the pathogen treatment process, the permitting authority may consider, among other things, the frequency of detection of enteric viruses and viable helminth ova during the two year period.

The fourth alternative for a sewage sludge to be classified Class A with respect to pathogens is for the sewage sludge to be monitored for fecal coliform or *Salmonella* sp. bacteria, enteric viruses, and viable helminth ova at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land, or at the time the sewage sludge is prepared to meet the requirements in 503.10 concerning exemption from the general requirements and management practices in the land application subpart. When the density values for the above organisms in the sewage sludge are equal to or less than the values for those organisms in this alternative, the sewage sludge is Class A with respect to pathogens.

The fourth Class A pathogen alternative can be used for sewage sludges for which there is no historical knowledge about how the sewage sludge was treated. For example, when a sewage sludge has been stored for a period and is now going to be used or disposed, this alternative can be used to determine whether the sewage sludge is Class A with respect to pathogens. Because there is no information about how the sewage sludge was treated prior to storage, one of the first three Class A pathogen alternatives cannot be used to determine whether the sewage sludge is Class A. Under this alternative, samples of the sewage sludge can be collected at the time of use or disposal and analyzed to determine whether the density values for the pathogenic organisms are equal to or less than the density values for those organisms in today's regulation. When the density values for the organisms are equal to or less than the values in this alternative, the sewage sludge is Class A. The density values in this alternative for fecal coliform or *Salmonella* sp. bacteria, enteric viruses, and viable helminth ova are the same as the density values for those organisms in Alternative 3.

The fifth and sixth alternatives also address the regrowth issue by requiring that the density of either fecal coliform or *Salmonella* sp. bacteria in the sewage sludge be below a specified value at the time the sewage sludge is used or disposed, at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land, or at the time the sewage sludge is prepared to meet the requirements in 503.10 concerning sewage sludge that is not subject to the general requirements and management practices in the land application subpart. In addition, under the fifth alternative, a sewage sludge must be treated in a Process to Further Reduce Pathogens (PFRP) to be classified Class A. Processes classified PFRPs are described in appendix B. These processes are the same processes described in appendix II to 40 CFR part 257. The descriptions in Appendix B were edited to remove any requirements for vector attraction (e.g., reduce volatile solids by 38 percent). A sewage sludge must meet one of the vector attraction requirements discussed below in addition to the pathogen requirements in the final part 503 regulation.

For the sixth Class A pathogen alternative, the regrowth requirements mentioned above must be met and the sewage sludge must be treated in a process that is equivalent to a Process to Further Reduce Pathogens, as determined by the permitting authority. The Agency currently has a group that advises the permitting authority whether a process is equivalent to a PFRP. That group is the Pathogen Equivalency Committee (PEC). The final decision on whether a process is equivalent to PFRP is made by the permitting authority based on recommendations by the PEC. The sewage sludge also must meet one of the vector attraction reduction requirements discussed below in addition to this pathogen requirement.

The Class B pathogen requirements in the final part 503 regulation also are different from the Class B requirements in the proposed regulation. In the proposal, either of two requirements had to be met. First, the densities of *Salmonella* sp. bacteria and viruses in the influent to the treatment works had to be reduced to below specific values. The second requirement was that when the wastewater is treated in physical or biological processes and the sewage sludge generated in those processes is treated in a physical, biological, or chemical addition process or stored for at least one day, the densities of fecal coliform and fecal streptococci in the sewage sludge had to be below a specific value. In addition, site restrictions were imposed when a Class B sewage sludge was applied to the land.

There are three alternatives in the final part 503 regulation for a sewage sludge to be classified Class B with respect to pathogens. The first Class B alternative requires that seven samples of sewage sludge that is used or

disposed be collected each time the sewage sludge is monitored. In addition, the geometric mean of the density of fecal coliform (expressed as either Most Probable Number or Colony Forming Units) in those samples must be less than 2,000,000. A geometric mean is the anti-logarithm of the arithmetic average of the logarithms for a certain number of values (in this case, values for the seven samples).

The second Class B alternative is that the sewage sludge be treated in a Process to Significantly Reduce Pathogens (PSRP). Appendix B contains a description of processes currently classified as PSRPs. Those processes are the same as the PSRP processes described in appendix II of 40 CFR part 257 with some editorial changes. One editorial change is that the vector attraction reduction requirements in the Appendix II descriptions were deleted in today's description. As mentioned above, a sewage sludge must meet one of the vector attraction reduction requirements discussed below in addition to the pathogen requirements in the final part 503 regulation.

The third Class B pathogen alternative in the final regulation is that the sewage sludge that is used or disposed be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens, as determined by the permitting authority. The Pathogen Equivalency Committee (PEC) discussed above helps the permitting authority decide whether a process is equivalent to a PSRP. The final decision on such a determination is the responsibility of the permitting authority.

The final part 503 regulation also contains site restrictions that must be met when a Class B sewage sludge is applied to the land. These restrictions provide time for the natural environment to reduce the pathogenic organisms in the sewage sludge.

Site restrictions in the final regulation for a Class B sewage sludge that is applied to the land are different from the site restrictions for that practice in the proposed regulation. These differences are discussed below.

The first site restriction pertains to food crops that touch the sewage sludge/soil mixture and are above ground totally. The proposed regulation restricted the growing of those crops for 18 months after the sewage sludge is applied to the land. The final regulation restricts the harvesting of those crops for 14 months after the application of the sewage sludge. The 14 month harvesting restriction assumes that crops will not be grown for 12 months and that the crops grow for two months before harvesting. This access restriction prevents exposure to viable helminth ova that survive for long periods in the soils on the land surface when the viable helminth ova are sheltered from sunlight and desiccation.

The second restriction pertains to food crops with harvested parts below the surface of the ground (i.e., root crops). The proposed regulation restricted the growing of those crops for five years after application of the sewage sludge. The final regulation contains two requirements for root crops depending on how long the sewage sludge remains on the land surface before incorporation into the soil.

The first requirement restricts the harvesting of food crops with harvested parts below the surface of the land for 20 months after application of the sewage sludge when the sewage sludge remains on the land surface for four months prior to incorporation into the soil. The Agency concluded that exposure of the sewage sludge to the natural environment during the four month period promotes die-off of viable helminth ova, which is the most persistent pathogen in a sewage sludge/soil mixture. This justifies the reduction in the period before a root crop can be harvested discussed below. The 20 month restriction assumes that food crops with harvested parts below the surface of the land will not be grown for 18 months and that the crops grow for two months before harvesting.

The other restriction for food crops with harvested parts below the surface of the land is that those crops cannot be harvested for 38 months after sewage sludge is applied to the land when the sewage sludge does not remain on the land surface for four months after application. In this case, the pathogenic organisms are not reduced as much by the natural environment (i.e., air and sunlight). For this reason, the restriction on harvesting root crops is 38 months to allow for die-off of viable helminth ova. This restriction assumes that the crops will not be grown for three years after application of the sewage sludge and that the crops grow for two months before they are harvested.

The site restrictions in the proposed regulation concerning the harvesting of feed crops and the grazing of animals are the same in the final regulation. Feed crops shall not be harvested and animals shall not be grazed for 30 days after application of sewage sludge to the land. The Agency concluded this is a long enough period to allow die-off of pathogens that may affect animals. This restriction also applies to the harvesting of food crops and fiber crops because the 30-day exposure to the environment is needed to allow die-off of pathogens that may affect humans.

A new site restriction concerning the harvesting of turf was added to the final regulation. The purpose of this site restriction is to prevent public exposure to turf grown on land where a Class B sewage sludge is applied. Most likely, turf grown on the land will be used on a lawn or on land with a high potential for public exposure (e.g., a public contact site). To restrict public exposure to that turf for one year, which is the same public access restriction for land with a high potential for public exposure (see below), the final part 503 regulation requires that turf grown on land where a Class B sewage sludge is applied not be harvested for one year after application of the sewage sludge when the harvested turf is placed on a lawn or on land with a high potential for public exposure, unless otherwise specified by the permitting authority.

The public access restriction for land on which a Class B sewage sludge is applied in the proposed regulation was expanded in the final part 503 regulation. The restriction in the final regulation recognizes that the potential for exposure to the sewage sludge is not the same for all types of land.

Some lands have a high potential for exposure to the public. Those lands include, but are not limited to, parks, ball fields, and a reclamation site located in a populated area (e.g., a construction site next to a high school). When a Class B sewage sludge is applied to those types of land, the final part 503 regulation requires that public access be restricted for one year after application of the sewage sludge. This period allows the pathogenic organisms to die off in the natural environment.

Other lands have a low potential for exposure because they are used infrequently by the public. These lands include, but are not limited to, land used for silviculture purposes, agricultural land, and a reclamation site located in an unpopulated area (e.g., a strip mine). Public access to lands with a low potential for exposure has to be restricted for 30 days after application of sewage sludge to the land.

The final part 503 regulation also contains alternative pathogen requirements for domestic septage applied to agricultural land, forest, or a reclamation site. The first requirement is that the site restrictions discussed above be met. When these restrictions are met, the domestic septage does not have to meet an additional pathogen requirement.

The second requirement is to raise the pH of the domestic septage to 12 or higher by alkali addition and, without

the addition of more alkali, maintain the pH at 12 or higher for 30 minutes. In addition, the site restrictions discussed above concerning harvesting of crops must be met. The site restrictions are needed because domestic septage is not considered Class A with respect to pathogens after the pH requirement is met. Site restrictions are needed to allow die-off of pathogens through exposure to the environment before crops are harvested.

The above pH requirement is based on the results of a study conducted at the University of Wisconsin on pathogens in domestic septage (Ronner, Amy B. and Dean O. Cliver, Ph.D., "Disinfection of Viruses in Septic Tank and Holding Waste by Calcium Hydroxide (Lime)", Small Scale Waste Management Project, University of Wisconsin, Madison, Wisconsin, June 1987). The Agency concluded that when the above pH requirement is met and site restrictions concerning harvesting of crops are met, public health and the environment are protected from the pathogenic organisms in domestic septage.

Vector Attraction Reduction (Section 503.33)

The vector attraction reduction requirements in the proposed regulation are adopted in the final regulation. Editorial changes were made to several of the proposed requirements. In addition, several new vector attraction reduction requirements were added to the final part 503 regulation. The vector attraction reduction requirements in the final regulation address: the reduction in the mass of volatile solids in sewage sludge that is used or disposed; an additional reduction in the mass of volatile solids for an anaerobically digested sewage sludge that is digested anaerobically for an additional period in the laboratory; an additional reduction in the mass of volatile solids for an aerobically digested sewage sludge that is digested aerobically for an additional period in the laboratory; the specific oxygen uptake rate for a sewage sludge digested aerobically; a sewage sludge treated in an aerobic process for a specific period during which the temperature of the sewage sludge is raised; an increase in the pH of the sewage sludge; the percent solids of the sewage sludge; injection of the sewage sludge below the land surface; incorporation of the sewage sludge into the soil; cover for a surface disposal site; and pH adjustment for domestic septage. These alternative requirements are discussed below.

Not all of the vector attraction reduction requirements in the final part 503 regulation pertain to the different sewage sludge use or disposal practices. For example, when sewage sludge is sold or given away in a bag or other container for application to the land, the vector attraction reduction requirement concerning injection below the land surface does not apply. Section 503.33 (a) in the final part 503 regulation indicates which vector attraction reduction requirements pertain to which use or disposal practices.

One vector attraction reduction requirement is that the mass of volatile solids in the sewage sludge be reduced by a minimum of 38 percent. The 38 percent reduction is determined by subtracting the mass of volatile solids in the sewage sludge that is used or disposed from the mass of volatile solids in the influent to the sewage sludge digestion process and dividing that value by the mass of volatile solids in the influent to the sewage sludge digestion process. This value is then multiplied by 100 to obtain the percent reduction. By reducing the volatile solids of the sewage sludge, the "source of food" for a vector is reduced, which reduces the attractiveness of the sewage sludge to the vector.

Editorial changes were made to the proposed vector attraction reduction requirement concerning a 17 percent volatile solids reduction for anaerobically digested sewage sludge that is digested anaerobically further in the laboratory. These changes clarify that the additional anaerobic digestion should occur in a bench-scale unit in the laboratory for 40 days at a temperature between 30 and 37 degrees Celsius and that the 17 percent reduction or less is the reduction of the volatile solids in the sewage sludge at the beginning of the 40 day period. This alternative requirement is included in the final regulation because the volatile solids content of some sewage sludges is low before the sewage sludge is treated in the anaerobic digester. In this case, it is very difficult to achieve a 38 percent volatile solids reduction during digestion. The Agency concluded that when the percent volatile solids reduction after the additional digestion period is 17 percent or less, vectors will not be attracted to the sewage sludge.

The above requirement for additional treatment of a sample of the sewage sludge in the laboratory also pertains to an aerobically digested sewage sludge. A similar requirement is included in the final regulation for an aerobically digested sewage sludge.

When an aerobically digested sewage sludge cannot meet the above 38 percent volatile solids reduction requirement, a portion of the previously digested sewage sludge that has a percent solids of two percent or less can be digested aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved for the sewage sludge.

The percent solids requirement (i.e., two percent or less) and temperature requirement are part of the above alternative because they affect the rate of digestion. When the percent solids is greater than two percent, the rate of digestion is slower than the rate of digestion when the percent solids is two percent or less. To ensure that the sewage sludge is digested fully during the 30 day period, the percent solids requirement and the temperature requirement are included in this alternative. A percent solids requirement is not included in the above alternative for additional digestion of an anaerobically digested sewage sludge because percent solids does not affect the rate of digestion during anaerobic digestion of a sewage sludge.

The percent volatile solids reduction in the above two alternative vector attraction reduction requirements is different for anaerobic digestion (i.e., 17 percent) and aerobic digestion (i.e., 15 percent). These percentages are based on experiences with the different types of digested sewage sludge.

The proposed vector attraction reduction requirement concerning the specific oxygen uptake rate (SOUR) also was changed in the final regulation. The changes are a different value for SOUR and the addition of a temperature requirement. In the final regulation, the SOUR of the sewage sludge treated in an aerobic process has to be equal to or less than 1.5 milligrams (instead of 1.0 in the proposal) of oxygen per hour per gram of total solids at 20 degrees Celsius for the sewage sludge to meet the vector attraction reduction requirement.

After reviewing the available information and comments on the proposal, the Agency concluded that vector attraction reduction can be achieved when the value for SOUR is equal to or less than 1.5. The temperature requirement is included in the SOUR vector attraction reduction requirement because the temperature of the sewage sludge affects the rate of digestion. The Agency concluded that for the sewage sludge to digested fully during aerobic digestion, the temperature of the sewage sludge should be 20 degrees Celsius.

Another vector attraction reduction requirement was added to the final

regulation for sewage sludge treated in an aerobic process. This requirement addresses the vector attraction of sewage sludges treated in processes such as composting and aerobic digestion. EPA concluded, based on available information, that when a sewage sludge is treated in an aerobic process for 14 days or longer during which time the temperature of the sewage sludge is higher than 40 degrees Celsius and the average temperature is higher than 45 degrees Celsius, volatile solids in the sewage sludge are reduced to a level that reduces the attractiveness of the sewage sludge to vectors.

The vector attraction reduction requirement in the proposal concerning raising the pH of the sewage sludge and maintaining the elevated pH for a period is the same in the final regulation. Only editorial changes were made to this requirement for the final regulation. Raising the pH of the sewage sludge reduces bacterial activity in the sewage sludge. This results in a reduction in the putrefaction of the sewage sludge, which reduces the odors from the sewage sludge. Because of the reduction in odors, vectors are not attracted to the sewage sludge.

One of the new vector attraction reduction requirements in the final part 503 regulation concerns the percent solids of the sewage sludge. In the proposal, when the percent solids of the sewage sludge was 75 or greater, based on the moisture and solids content of the sewage sludge prior to mixing with other materials, the vector attraction reduction requirement was met. The final part 503 regulation contains two percent solids requirements for vector attraction reduction.

One of the percent solids requirements is the same as in the requirement in the proposal (i.e., 75 percent). This requirement only applies, however, when the sewage sludge does not contain unstabilized solids generated in a primary wastewater treatment process. When the sewage sludge contains unstabilized solids generated in a primary wastewater treatment process, the percent solids of the sewage sludge has to be equal to or greater than 90 percent. This change was made because the Agency is concerned that regrowth of *Salmonella* sp. bacteria may occur when the sewage sludge contains unstabilized solids such as food products that *Salmonella* sp. bacteria can use for nutrients. When the percent solids of the sewage sludge is equal to or greater than 90, EPA concluded that the regrowth problem is mitigated even if the sewage sludge contains unstabilized solids.

The vector attraction reduction requirement in the proposal concerning injection of the sewage sludge below the land surface was edited and expanded in the final regulation. First, this vector attraction reduction requirement now clarifies that no significant amount of sewage sludge can be visible on the land surface within one hour after the sewage sludge is injected. Second, this requirement addresses the time during which a Class A sewage sludge has to be injected after discharge from the pathogen reduction process. Injection of a Class A sewage sludge within a specific time period was addressed in the Class A pathogen requirement in the proposal. The Agency chose to include this requirement in the section on vector attraction reduction in the final regulation to make the final part 503 regulation consistent.

In addition to changing the location of the vector attraction requirement for the injection of a Class A sewage sludge, the requirement itself was changed. The proposed regulation required that the density of fecal coliform and fecal streptococci in the Class A sewage sludge not exceed three logarithms per gram of volatile suspended solids prior to injection. EPA decided to change this requirement to "the sewage sludge shall be injected below the land surface within eight hours after the sewage sludge is discharged from the pathogen reduction process(es)". The Agency concluded that significant regrowth of *Salmonella* sp. bacteria will not occur when the sewage sludge is injected within the eight hour period.

Another vector attraction reduction requirement in the final part 503 regulation concerns incorporation of sewage sludge into the soil. EPA concluded that vector attraction reduction is minimal during the first six hours after sewage sludge is applied to or placed on the land surface. After that time, the potential for vector attraction increases. For this reason, this vector attraction reduction requirement requires that the sewage sludge be incorporated into the soil within six hours after application to or placement on the land. Incorporation into the soil reduces the opportunity for vectors to contact the sewage sludge.

The vector attraction reduction requirement concerning incorporation of the sewage sludge into the soil also requires that sewage sludge that is Class A with respect to pathogens be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process. After that, the sewage sludge must be incorporated into the soil within six hours after being applied to or placed on the land. The purpose of this requirement is to ensure that regrowth of *Salmonella* sp. bacteria do not occur between the time the sewage sludge is discharged from the pathogen treatment process and the time the sewage sludge is applied to or placed on the land.

Also included in the final part 503 regulation is an alternative vector attraction reduction requirement when sewage sludge is placed on an active sewage sludge unit. When the sewage sludge is covered with soil or other material at the end of each operating day, vector attraction reduction is achieved. Vectors do not have the opportunity to contact the sewage sludge when the sewage sludge is covered. This requirement was in the subpart on monofills in the proposed part 503 regulation. Because the purpose of covering the sewage sludge is to reduce vector attraction, the Agency decided to include this requirement in the section on vector attraction reduction in the final part 503 regulation.

A new vector attraction reduction requirement concerning domestic septage also was added to the final regulation. This requirement is in response to comments that domestic septage cannot meet the vector attraction reduction requirement for sewage sludge. To meet this new requirement, the pH of the domestic septage must be raised to 12 or higher using alkali and, without the addition of more alkali, must remain at 12 or higher for 30 minutes. This requirement is based on results from the University of Wisconsin Study mentioned previously in the discussion on the pathogen requirements.

Incineration (Subpart E)

This part of today's preamble discusses the requirements in the final part 503 regulation for firing of sewage sludge in a sewage sludge incinerator. More details on these requirements may be obtained from the technical support document for the part 503 sewage sludge incineration requirements.

Applicability (Section 503.40)

The applicability section for this subpart in the final part 503 regulation is the same, with the exception of some editorial changes, as the applicability section for this subpart in the proposed regulation. This subpart applies to any person who fires sewage sludge in a sewage sludge incinerator, to a sewage sludge incinerator, to sewage sluage fired in a sewage sludge incinerator, and to the exit gas from a sewage sludge incinerator stack.

Special Definitions (Section 503.41)

Definitions for the following terms are included in this section of the final regulation: Air pollution control device, auxiliary fuel, control efficiency, dispersion factor, fluidized bed incinerator, incineration, hourly average, monthly average, risk specific concentration, sewage sludge feed rate, sewage sludge incinerator, stack height, total hydrocarbons, wet electrostatic precipitator, and wet scrubber. The definitions in this subpart discussed below amplify and reinforce the incineration requirements in the final part 503 regulation.

Auxiliary fuel. The definition of auxiliary fuel is included in the final regulation because a sewage sludge incinerator is defined as an incinerator in which sewage sludge and auxiliary fuel are fired. Auxiliary fuel is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, or municipal solid waste (not to exceed 30 percent of the sewage sludge and auxiliary fuel together by dry weight). Auxiliary fuel does not include hazardous wastes.

As mentioned above, auxiliary fuel may be municipal solid waste if the municipal solid waste is less than 30 percent by weight (dry weight basis) of the material, including sewage sludge, fired in the sewage sludge incinerator. In that case, the part 503 requirements for the incineration of sewage sludge in a sewage sludge incinerator have to be met. When 30 percent or greater of the material fired in an incinerator is municipal solid wastes, the incinerator is a municipal waste combustor and the regulations that address firing of materials in a municipal waste combustor must be met.

Control efficiency. Control efficiency is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator. The final regulation requires that control efficiency be determined from a performance test of the sewage sludge incinerator, as specified by the permitting authority.

Dispersion factor. The definition of dispersion factor in the proposed regulation is clarified in the final regulation. Dispersion factor is the increase in the ground level ambient air concentration for a pollutant at a specific distance from the sewage sludge incinerator stack because of the incineration of sewage sludge divided by the mass emission rate for the pollutant from the sewage sludge incinerator stack. The units for a dispersion factor are micrograms per cubic meter per gram per second.

Incineration. Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device. The phrase "controlled flame combustion" is not included in that definition because high temperatures may be achieved in an enclosed device without controlled flame combustion. Today's definition ensures that the requirements in the final regulation for incineration apply to any enclosed device in which organic material and inorganic matter in sewage sludge are combusted by high temperatures and not just to those that employ controlled flame combustion.

Hourly average. An hourly average is the arithmetic mean of the number of measurements taken during an hour. To determine an hourly average, at least two measurements must be taken during the hour. This definition is in the final regulation because this term is used in the definition of a monthly average.

Monthly average. A monthly average is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month. Note that only the hourly averages for the hours a sewage sludge incinerator operates during the month are used to calculate a monthly average. This definition is included in the final regulation because the allowable total hydrocarbons concentration in the exit gas from a sewage sludge incinerator stack is a monthly average concentration.

Risk specific concentration. Risk specific concentration is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of the site where the sewage sludge incinerator is located. A risk specific concentration is either provided in the final regulation for each pollutant controlled in this subpart, except total hydrocarbons, or can be calculated using an equation in the final regulation.

Sewage sludge feed rate. The difference in the definition of sewage sludge feed rate in the proposal and the definition in the final regulation is the amount of sewage sludge fed to the incinerator. The proposed regulation indicated that the feed rate was either the average amount of sewage sludge fed to the incinerator or the design capacity of the incinerator.

In the final part 503 regulation, the feed rate is either the average daily amount of sewage sludge fired for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each incinerator operates, or the average daily design capacity for all of the sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located. When there is more than one sewage sludge incinerator located at a site, the pollutant limits for each incinerator are calculated using the same sewage sludge feed rate.

When the design capacity of the sewage sludge incinerators is not used to determine the sewage sludge feed rate, the average daily amount of sewage sludge fired in all sewage sludge incinerators is the sewage sludge feed rate. This change clarifies how the average daily amount should be determined. This rate is based on the average daily amount of sewage sludge fired for the days in a 365 period that each incinerator operates. This results in an average daily amount of sewage sludge fired based on actual operating days for each incinerator. This value would be lower if the days the incinerators do not operate (i.e., zero amount fired on those days) are considered in developing the average daily amount fired.

Sewage sludge incinerator. The definition of sewage sludge incinerator in the final part 503 regulation is an incinerator in which sewage sludge and auxiliary fuel are fired. The term "auxiliary fuel" was added to today's definition to clarify that a sewage sludge incinerator is an incinerator in which sewage sludge and auxiliary fuel are fired. As mentioned previously, hazardous wastes are not auxiliary fuel.

General Requirements (Section 503.42)

For the final part 503 rule, EPA reorganized the general requirements and management practices in the proposal for subpart E. Only one of the general requirements in this subpart for the proposal is still a general requirement in the final part 503 regulation; one is included in the general provisions in the final part 503 regulation; four are management practices in this subpart; one is included in the section on pollutant limits in this subpart; one is included in a definition in the final regulation; one is in the section on frequency of monitoring in this subpart of the final regulation; and one was deleted from the final regulation. These changes are discussed below.

The first general requirement concerns a person who fires sewage sludge in a sewage sludge incinerator. The final part 503 regulation requires that no person shall fire sewage sludge in a sewage sludge incinerator unless the requirements in this subpart are met. As mentioned above, this is the only general requirement in the incineration subpart.

The general requirement concerning access to sewage sludge fed to a sewage sludge incinerator was modified and is included in 503.8—Sampling and analysis. The general provision requires that representative samples of sewage sludge fired in a sewage sludge incinerator be collected and analyzed.

EPA proposed general requirements for this subpart concerning: (1) An instrument that measures and records the total hydrocarbons in the exit gas from a sewage sludge incinerator stack; (2) an instrument that measures and records the oxygen content in the exit gas from a sewage sludge incinerator stack; (3) an instrument that measures and records information used to determine the moisture content in the sewage sludge incinerator stack exit gas; (4) an instrument that measures and records combustion temperatures. These proposed general requirements are management practices in the final part 503 regulation.

One of the other proposed general requirements required that a sewage sludge incinerator comply with the requirements promulgated under the authority of the Clean Air Act in 40 CFR 61.30 through 61.34 for beryllium and 40 CFR 61.50 through 61.55 for mercury. These requirements are now included in the section on pollutant limits in the final part 503 regulation. This proposed general requirement also required that the requirements in 40 CFR 60.150 through 60.154 for new sources be met. The Agency decided not to include this part of the proposed general requirement in the final part 503 regulation because those requirements are not needed to protect public health and the environment from the reasonably anticipated adverse effects of pollutants in sewage sludge. Those requirements still have to be met, however. They are just not a requirement in part 503.

Another general requirement in the proposal required that the sewage sludge feed rate for all incinerators within the property line of the treatment works be used to calculate the pollutant limits for incineration of sewage sludge. Because the definition of sewage sludge feed rate in the final part 503 regulation is based on the calculation for all incinerators at the facility, the general requirement was deleted from the final regulation.

The general requirement in the proposal concerning the monitoring requirements are now included in a separate section in the final regulation. For this reason, this general requirement was deleted from the final regulation.

Another general requirement in the proposed regulation required that incinerator ash be disposed in accordance with the requirements in 40 CFR parts 257, 258, or 261 through 268, as appropriate. Because the final part 503 regulation does not apply to incinerator ash, the Agency decided not to address the disposal of incinerator ash in this subpart.

Pollutant Limits (Section 503.43)

Several changes were made in the final part 503 regulation to the proposed pollutant limits. These changes are discussed below.

In the proposed regulation, equations were presented to calculate pollutant limits for beryllium and mercury. These equations are deleted from the final regulation. Instead, beryllium and mercury in sewage sludge fired in a sewage sludge incinerator are controlled through the National Emission Standards for each of those pollutants. The final part 503 regulation requires that firing of sewage sludge in a sewage sludge incinerator shall not violate the requirements in the National Emission Standard for Beryllium in subpart C of 40 CFR part 61 and the National Emission Standard for Mercury in subpart E of 40 CFR part 61.

The proposed regulation also contained equations used to establish pollutant limits for lead, arsenic, cadmium, chromium, and nickel. Those equations are modified in the final regulation. The equation in the final regulation used to calculate the pollutant limit for lead is:

$$C = \frac{0.1 \times (NAAQS) \times 86{,}400}{DF \times (1 - CE) \times SF}$$

Where:

C=Allowable daily concentration of lead in milligrams per kilogram of total sewage sludge solids (dry weight basis).

NAAQS=National Ambient Air Quality Standard for lead in micrograms per cubic meter.

DF=Dispersion factor in micrograms per cubic meter per gram per second.

CE=Sewage sludge incinerator control efficiency for lead in hundredths.

SF=Sewage sludge feed rate in metric tons per day (dry weight basis).

The 0.1 value in the above equation allocates 10 percent of the NAAQS for lead to the firing of sewage sludge in a sewage sludge incinerator. This is discussed further in other parts of today's preamble.

One of the terms in the above equation is the control efficiency (i.e., percent removal of the pollutant) for the sewage sludge incinerator. The value for control efficiency could be obtained from a table in the proposed regulation (i.e., national value) or could be determined from a performance test of the incinerator (i.e., case-by-case limit). The final regulation requires that the control efficiency be obtained from a performance test of the incinerator, as specified by the permitting authority. Consequently, the table in the proposal with the control efficiencies used to calculate the national pollutant limits was deleted from the final part 503 regulation.

Another parameter in the above equation is the dispersion factor. In the proposal, the dispersion factor could be obtained from a table in the proposed regulation (i.e., used to calculate a national limit) or could be determined using an air dispersion model (i.e., used to calculate a case-by-case limit), as specified by the permitting authority. Again, like control efficiency, the final regulation requires that the dispersion factor be determined specifically for the site using either the height of the incinerator stack or the creditable stack height in an air dispersion model, as specified by the permitting authority. The final part 503 regulation does not contain values for dispersion factor.

The above changes concerning pollutant control efficiencies and dispersion factors allow the actual performance of the sewage sludge incinerator for a particular sewage sludge and the actual site conditions (e.g., actual topography) to be considered in developing the incinerator control efficiency for a pollutant and dispersion factor, respectively. The Agency concluded this is more appropriate than prescribing the pollutant control efficiencies and dispersion factors in the final part 503 regulation.

The equation in the final regulation used to calculate the pollutant limits for arsenic, cadmium, chromium, and nickel is:

$$C = \frac{RSC \times 86{,}400}{DF \times (1 - CE) \times SF}$$

Where:

C=Allowable daily concentration of arsenic, cadmium, chromium, or nickel in milligrams per kilogram of total sewage sludge solids (dry weight basis).

CE=Sewage sludge incinerator control efficiency for arsenic, cadmium, chromium, or nickel in hundredths.
DF=Dispersion factor in micrograms per cubic meter per gram per second.
RSC=Risk specific concentration for a pollutant in micrograms per cubic meter.
SF=Sewage sludge feed rate in metric tons per day (dry weight).

As mentioned above, values for control efficiency are determined from a performance test of the incinerator, as specified by the permitting authority. The dispersion factor is determined using either the incinerator stack height or the creditable stack height in an air dispersion model, as specified by the permitting authority. The risk specific concentration for arsenic, cadmium, and nickel is obtained from a table in this subpart of the final regulation.

In the proposed regulation, the value for the risk specific concentration for chromium was given in a table. In the final part 503 regulation, the risk specific concentration for chromium either can be obtained from a table in the final part 503 regulation or can be calculated using an equation provided in the regulation.

Different values for the risk specific concentration for chromium are presented in Table 2 of section 503.43 depending on the type of incinerator with attendant air pollution control devices used to fire the sewage sludge. These values are based on data for the different types of incinerators with attendant air pollution control devices and the percentage of hexavalent chromium in the exit gas from the sewage sludge incinerator stack. For example, available information indicates that the percentage of hexavalent chromium in the stack exit gas from a fluidized bed incinerator with a wet scrubber and a wet electrostatic precipitator is approximately 3.8 percent. This percentage was used to calculate the risk specific concentration for chromium in Table 2 of section 503.43 for that type of incinerator.

The percentage of hexavalent chromium in the exit gas from a sewage sludge incinerator is important because the hexavalent chromium has the most effect on public health. As the percentage of hexavalent chromium increases, the risk specific concentration, which is the allowable increase in the average daily ground level ambient air concentration of a pollutant from the incineration of sewage sludge, for total chromium decreases.

When the risk specific concentrations in Table 2 of section 503.43 are not used, the risk specific concentration for chromium can be calculated using equation (6) in the final regulation. The value 0.0085 in equation (6) is the risk specific concentration for chromium when the percentage of hexavalent chromium in total chromium emitted is 100 percent. To use the equation, the percent of hexavalent chromium in the exit gas from the sewage sludge incinerator stack has to be measured. That value is then used in the equation.

Operational Standard (Section 503.44)

Under the proposed rule, the allowable emissions of total hydrocarbons in the exit gas from the sewage sludge incinerator stack were controlled. This approach was adopted because EPA concluded that it is infeasible to establish a limit that protect public health for each organic pollutant in the exit gas. Consequently, EPA proposed a risk-based operational standard that limited total hydrocarbons in the exit gas using site-specific factors. In the final part 503 regulation, the pollutant limit for total hydrocarbons is similarly an operational standard. This operational standard is based, however, on the demonstrated performance of sewage sludge incinerators using available technology. The operational standard includes a THC concentration that cannot be exceeded in the exit gas from the incinerator. The total hydrocarbons concentration measured in the stack exit gas must be corrected for zero percent moisture and to seven percent oxygen using equations provided in the final regulation. The corrected value cannot exceed the monthly average concentration for total hydrocarbons specified in the final regulation.

The allowable THC concentration is a monthly average. Such an average is consistent with the assumptions made in the cancer risk assessment that supports the regulation. Implicit in the monthly average are excursions that recognize that the THC value may not be met every second of every day. This is satisfactory as long as the monthly average does not exceed 100 parts per million on a volumetric basis. EPA concluded that in the case of sewage sludge incinerators, the monthly average THC concentration is appropriate.

As mentioned above, the operational standard for THC in the final regulation is based on the performance of an incinerator with an instrument that measures a "hot" THC. For this reason, a management practice (i.e., 503.45(a)) is included in the final regulation that requires THC to be measured using an instrument that measures "hot" THC.

In the judgment of the Administrator of EPA, the operational standard for THC in the final regulation protects public health from reasonable anticipated adverse effects of organic pollutants in the incinerator stack exit gas when sewage sludge is fired in a sewage sludge incinerator. More details on how the risks associated with the total hydrocarbons operational standard were calculated are presented in part VIII of this preamble.

Management Practices (Section 503.45)

The final part 503 regulation contains seven management practices for the firing of sewage sludge in a sewage sludge incinerator. The management practices are generally intended to ensure that a sewage sludge incinerator operates within the defined parameters associated with the calculation of the pollutant limits for inorganic pollutants and with the achievement of the THC regulatory level.

The first management practice requires that an instrument that measures and records the total hydrocarbons concentration in the sewage sludge incinerator stack exit gas continuously be installed, calibrated, operated, and maintained for each sewage sludge incinerator. The total hydrocarbons instrument must employ a flame ionization detector; must have a heated sampling line maintained at a temperature of 150 degrees Celsius or higher at all times; and must be calibrated at least once every 24-hour operating period using propane. More discussion on the requirement to monitor THC continuously is presented in other parts of today's preamble.

The second management practice requires installation of an instrument that measures and records the oxygen concentration in the sewage sludge incinerator stack exit gas continuously. Such an instrument must be calibrated, operated, and maintained for each sewage sludge incinerator. This management practice is needed to obtain the information to correct the THC concentration to seven percent oxygen.

The third management practice requires the installation of an instrument that measures and records information used to determine the moisture content in the sewage sludge incinerator stack exit gas continuously. Such an instrument must be calibrated, and maintained for each sewage sludge incinerator. Information obtained through this management practice is used to correct the measured THC concentration for zero percent moisture.

The fourth management practice requires the installation of an instrument that measures and records combustion temperatures continuously.

Such an instrument must be calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority. This management practice is needed to obtain information about combustion temperatures and to ensure that the sewage sludge incinerator is operated in a manner similar to how it was operated during the performance test to determine pollutant control efficiencies.

The fifth management practice indicates that the permitting authority will specify the maximum combustion temperature for the sewage sludge incinerator. That temperature will be based on information obtained during the performance test of the incinerator to determine pollutant control efficiencies. This management practice ensures that the maximum combustion temperature does not exceed the maximum combustion temperature during the performance test.

The sixth management practice indicates that the permitting authority will specify the values for the operating parameters for the sewage sludge incinerator air pollution control device. Those values also will be based on information obtained during the performance test to determine pollutant control efficiencies. The purpose of this management practice is to ensure that the air pollution control device is operated in a manner similar to how it was operated during the performance test.

The final regulation provides that firing of sewage sludge in a sewage sludge incinerator is prohibited if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat (503.45(g)). EPA will develop guidance to carry out this provision consistent with the Endangered Species Act.

Frequency of Monitoring (Section 503.46)

This section contains the frequency of monitoring requirement that apply when sewage sludge is fired in a sewage sludge incinerator. This includes the frequency of monitoring for pollutant concentrations, total hydrocarbons concentration and oxygen concentration in the exit gas from a sewage sludge incinerator stack, information used to calculate the moisture content in the exit gas, combustion temperatures, and the air pollution control device operating parameters.

The frequency of monitoring for pollutant concentrations is based on the amount of sewage sludge fired in a sewage sludge incinerator during a 365 day period. The larger the amount fired, the more frequently the sewage sludge fed to the sewage sludge incinerator must be monitored for pollutant concentrations. A discussion of the amounts of sewage sludge in the frequency of monitoring table is presented in the section in today's preamble on land application and in the technical support document for the part 503 incineration requirements.

Part 503 also requires that the THC concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, information used to calculate the moisture content in the exit gas, and combustion temperatures be monitored continuously. In addition, the final regulation indicates that the frequency of monitoring for the air pollution control device parameters shall be determined by the permitting authority.

The final regulation allows the permitting authority to reduce the frequency of monitoring for pollutant concentrations after two years of monitoring at the required frequency, as long as the frequency of monitoring is at least once per year when sewage sludge is fired in a sewage sludge incinerator. In deciding whether to reduce the frequency of monitoring, the permitting authority should consider, among other things, the variability of the pollutant concentrations and the magnitude of the pollutant concentrations. The Agency concluded that two years is an adequate period to collect data to make the judgment about reducing the frequency of monitoring. Note that only the permitting authority can reduce the frequency of monitoring.

Recordkeeping (Section 503.47)

The final part 503 regulation requires the person who fires sewage sludge in a sewage sludge incinerator to develop the information specified in this section and to retain the information for five years. The information that has to be developed is information needed to calculate pollutant limits for lead, arsenic, cadmium, chromium, and nickel; information needed to ensure the limits for those pollutants are met; and information needed to ensure the standards for beryllium and mercury are met. In addition, records of the total hydrocarbons and oxygen concentrations in the exit gas from a sewage sludge incinerator, the information needed to calculate moisture content of the exit gas, and information on combustion temperatures and air pollution control device operating parameters must be kept.

Reporting (Section 503.48)

Class I sludge management facilities, POTWs with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more must report the information in 503.47(b) through 503.47(h) to the permitting authority once per 365 day period. The section in today's preamble on land application explains the reasons for requiring Class I sludge management facilities, POTWs with a design flow rate of one MGD or greater, and POTWs that serve 10,000 people or more to report information.

Part XII: Implementation of 40 CFR Part 503

Clean Water Act

The 1987 amendments to the Clean Water Act included significant changes to section 405 regarding the implementation of standards for the use or disposal of sewage sludge. Prior to the 1987 amendments, the CWA required that EPA develop standards for the use and disposal of sewage sludge applicable to POTWs, but it did not specify how the standards were to be implemented, whether through permits and, if so, under what authority. Traditionally, National Pollutant Discharge Elimination System (NPDES) jurisdiction under the CWA arises when a point source discharges pollutants to navigable waters. Thus questions arose about the applicability of NPDES permits to regulate sewage sludge disposal that did not involve discharges to navigable waters. Likewise, other permits either are medium-specific (e.g., permits issued under the Clean Air Act) or regulate particular substances or methods of disposal (e.g., Subtitle D of the Resource Conservation and Recovery Act (RCRA)); therefore, they also were ill-equipped to regulate comprehensively the use and disposal of sewage sludge across all media.

The 1987 CWA amendments establish a program to protect public health and the environment from the reasonably anticipated adverse effects of pollutants in sewage sludge. In addition to requiring development of standards that establish pollutant limits and management practices for each use and disposal method, the CWA establishes requirements for inclusion of these standards in specified permits issued to treatment works treating domestic sewage. Thus, section 405(f) requires inclusion of conditions to implement the sewage sludge standards in NPDES permits, unless these conditions are included in a permit issued either under one of the listed Federal programs or by an approved State sewage sludge

program. Section 405(f)(1), as amended, provides:

> Through Section 402 Permits.—Any permit issued under Section 402 of this Act to a publicly owned treatment works or any other treatment works treating domestic sewage shall include requirements for the use and disposal of sludge that implement the regulations established pursuant to subsection (d) of this section, unless such requirements have been included in a permit issued under the appropriate provisions of subtitle C of the Solid Waste Disposal Act, part C of the Safe Drinking Water Act, the Marine Protection, Research, and Sanctuaries Act of 1972, or the Clean Air Act, or under State permit programs approved by the Administrator, where the Administrator determines that such programs assure compliance with any applicable requirements of this section * * *

Thus the CWA requires EPA to implement the standards through NPDES permits unless the standards are not included in a Clean Air Act permit, a RCRA subtitle C permit, a Marine Protection, Sanctuaries, and Research Act permit, an Underground Injection Control permit under the Safe Drinking Water Act, or an approved State program permit. It is clear that permit coverage among the programs is to be complementary, not duplicative. However, it also is clear from the statutory scheme that Congress contemplated comprehensive coverage of publicly owned treatment works and other treatment works treating domestic sewage through the permit program. No facilities are to go unpermitted merely because they fall outside the traditional jurisdiction of medium-specific programs. Thus, if a POTW or other treatment works treating domestic sewage does not have an NPDES permit, or any of the other permits listed in section 405(f)(1) that implements the sewage sludge standards, the CWA provides that EPA may issue a permit solely to implement the sewage sludge standards, commonly referred to as a "sludge-only permit." (See CWA section 405(f)(2).)

Another important provision of section 405(f)(1) allows a State to issue permits to implement the technical standards where the State permit program has been approved by the Administrator. The Administrator may approve a State program upon determining that the State program will assure compliance with the requirements of section 405. EPA interpreted the CWA to provide for optional, not mandatory, State programs, even if the State already has an approved NPDES program. In the absence of an approved State program, the appropriate EPA Regional Office will be the permit issuance authority for that State.

In addition, section 405(e) of the statute is clear that the obligation to comply with sewage sludge standards is independent of any permit or permit conditions.

> The determination of the manner of disposal or use of sludge is a local determination except that it shall be unlawful for any person to dispose of sludge from a publicly owned treatment works or any other treatment works treating domestic sewage for any use for which regulations have been established pursuant to [section 405(d)], except in accordance with such regulations.

Sewage Sludge Management Program Regulations

On May 2, 1989, EPA promulgated regulations outlining the criteria for approving State sludge permit programs and establishing permitting requirements for sewage sludge management (54 FR 18726). These regulations implement two CWA requirements: first, that permits issued to POTWs and other treatment works treating domestic sewage contain the sewage sludge standards; and second, the requirement that EPA promulgate procedures for the approval of State programs. The purpose of the State program and permitting rules is to provide the implementation framework for the sewage sludge technical standards by: (1) Providing permit conditions to incorporate the standards into permits, as well as additional requirements to track compliance with the standards; and (2) setting approval requirements for State sewage sludge programs so that States can implement the section 405 requirements.

The May 2, 1989, regulations contained three principal sections. First, the rules revised the existing NPDES permitting regulations at 40 CFR parts 122 and 124 to include sewage sludge conditions in NPDES permits and established these regulations as the basis for issuing sludge-only permits. Second, the rules contained revisions to 40 CFR part 123 for States with NPDES authority that wish to modify their existing NPDES programs to include the regulation of sewage sludge. Third, the May 2, 1989, rules contained a separate part, part 501, establishing procedures for approving State sludge management programs that are not part of a State's NPDES program. In addition, part 501 specifies the requirements for State non-NPDES sewage sludge programs. These regulations reflect the intention of CWA section 405(f) that the sewage sludge standards may be included in any of a number of permits under different programs, so long as they are addressed in a permit issued to a POTW or other treatment works treating domestic sewage. When EPA is the permitting authority (i.e., where the State has not sought and obtained approval of its sewage sludge permitting program), the sewage sludge requirements will be implemented primarily through NPDES permits, unless the requirements are contained in one of the other listed Federal permits.

Requirements Prior to Promulgation of the Technical Standards

The CWA also requires that, prior to promulgation of the technical standards, NPDES permits issued to POTWs are to contain sewage sludge conditions. Moreover, the Administrator is authorized to take other appropriate measures to protect public health and the environment from the adverse effects of sewage sludge (see CWA section 405(d)(4)). In response to this call for controls before promulgation of the technical standards, EPA developed an interim strategy for sewage sludge permitting, in a document entitled "Strategy for Interim Implementation of Sludge Requirements in Permits Issued to POTWs" (September 1989).

Now that the part 503 standards are promulgated in today's action, EPA will regulate the use and disposal of sewage sludge by those standards. The interim program, however, will continue to apply to those facilities, pollutants, and use and disposal methods not covered by today's standards. EPA retains authority to impose permit limits developed on a case-by-case basis or to take other appropriate action necessary to protect public health and the environment regarding pollutants and management practices not regulated by the part 503 standards, and to impose more stringent limits and requirements where the part 503 standards are not sufficiently protective at a particular site.

Relationship Between the Sewage Sludge Program Regulations and Today's Standards for Sewage Sludge Use or Disposal

The standards for sewage sludge use or disposal promulgated today apply to various final use or disposal practices that may be carried out by numerous parties. Before the 1987 CWA amendments, the standards applied only to POTWs. Recognizing that parties other than POTWs are likely to use or dispose of sewage sludge, Congress amended section 405(e) to make the standards applicable to any person who uses or disposes of sewage sludge. Thus, the Clean Water Act provides that

POTWs and other treatment works treating domestic sewage, as well as other users and disposers, are subject to the standards. Moreover, section 405(e) makes these standards independently enforceable even if conditions to implement the standards have not been included in a permit as provided in section 405(f).

EPA's program for implementing and enforcing today's standards follows the two-pronged approach established by the Clean Water Act. First, the standards are directly enforceable against any user or disposer of sewage sludge. POTWs and other generators of sewage sludge are users and disposers of sewage sludge even if final use or disposal is provided by some other party. Under the existing regulations and in accordance with the Interim Permitting Strategy, permits reissued to POTWs after the 1987 amendments should include conditions specifying that POTWs are expected to comply with the part 503 standards by the statutory deadlines even if the permits themselves are not modified to incorporate those standards. EPA will enforce the final part 503 standards in accordance with the Agency's existing Enforcement Management System (EMS). Second, the standards will be implemented through permits issued to POTWs and other treatment works treating domestic sewage (discussed more fully in the following section on "who must apply for a permit"). Initially, EPA will rely strongly on the direct enforceability of the standards. Over the long term, however, EPA intends that permits will become the primary mechanism for implementing the standards for POTWs and other treatment works treating domestic sewage.

The following discussion addresses several key issues related to implementation of the standards using the programmatic framework established by the permitting requirements and State program rules promulgated on May 2, 1989: (1) Who must apply for a permit, (2) permit application requirements, (3) permitting priorities, (4) requirements in the absence of a permit, (5) who issues the permit and the role of existing State programs, and (6) EPA's plans for outreach and training to foster implementation of the standards. Many of the permitting issues, as well as others related to the national sewage sludge program, are discussed in more detail in the May 2, 1989, **Federal Register** notice (54 FR 18716) .

Who Must Apply for a Permit

The CWA requires today's technical standards to be included in permits issued to the key actors involved in generating, treating, and disposing of sewage sludge. Section 405(f)(1) defines the permitting universe to include POTWs and other treatment works treating domestic sewage, including facilities that are not required to obtain NPDES permits pursuant to section 402 of the CWA (section 405(f)(2)). "Treatment works treating domestic sewage" is defined at 40 CFR 122.2 to mean:

> A POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including Federal facilities) used in the storage, treatment, recycling and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices. For purposes of this definition, "domestic sewage" includes waste and waste water from humans or household operation that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal in 40 CFR part 503 as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR part 503.

As explained in the preamble to the sludge permitting regulations, the purpose of this definition is to capture all those facilities that "generate sewage sludge or otherwise effectively control the quality of sewage sludge or the manner in which it is disposed (and hence its effect on the environment.)" 54 FR 18725–6 (May 2, 1989). Thus, all POTWs must have permits that implement applicable technical standards. Generally, the permit issued to the POTW must include standards applicable to sewage sludge quality as well as the other permit conditions required by 40 CFR part 122 (e.g., standard conditions and compliance monitoring requirements). In addition, the permit may include conditions related to any aspect of sewage sludge management developed on a case-by-case basis where the permitting authority determines that such conditions are necessary to protect public health and the environment. For example, today's rule does not establish standards for temporary storage of sewage sludge. The permitting authority may develop permit requirements to address potential problems at temporary storage facilities such as contamination of surface water or ground water or unrestricted public access to temporary storage locations.

The permit may also include conditions establishing a POTW's responsibilities when it sends its sewage sludge to other facilities for final use or disposal. As a general rule, a permit issued to a POTW that sends its sewage sludge to another treatment works treating domestic sewage should specify the conditions under which that POTW would be relieved of its responsibility for use or disposal of its sewage sludge in compliance with section 405(d) standards. Generally, a POTW retains responsibility for use and disposal of its sewage sludge (i.e., compliance with part 503 standards applicable to its use or disposal practices) unless it transfers its sewage sludge to another treatment works treating domestic sewage. For example, a permit issued to a POTW that sends its sewage sludge to an incinerator owned by another municipality would not necessarily include all standards applicable to incineration. The permit for the generating POTW would generally have standard conditions, while the permit issued to the incinerator would contain standard conditions and other specific conditions relating to the operation of the incinerator and the quality of sewage sludge going into the incinerator.

The scheme contemplates that facilities other than POTWs may also be required to apply for permits. Treatment works treating domestic sewage, as noted above, include facilities dedicated to the disposal of sewage sludge (i.e., surface disposal sites and incinerators). In addition, certain facilities that handle sewage sludge may be required to apply for a permit, particularly where they alter the nature of the sewage sludge before ultimate use or disposal. EPA considers that the sewage sludge has undergone a change in quality if, through processes such as stabilization, composting, digestion, or heat treatment, a change has occurred in pollutant concentrations, pathogen levels, or vector attraction properties of the sewage sludge (on a dry weight basis) sufficient to change its regulatory status under part 503. A sewage sludge also changes in quality if it is blended permanently with bulking agents (such as sawdust or wood chips) or with sewage sludge from another treatment works (as a material derived from sewage sludge, a sewage sludge product remains subject to the definition of sewage sludge under section 503.9).

EPA does not consider dewatering, of itself, to constitute a change in sludge quality. Dewatering increases the solids content of sewage sludge without

necessarily changing its dry-weight pollutant concentrations, pathogen levels, or vector attraction properties; in addition, because sewage sludge monitoring information is reported on a dry weight basis, the solids content of the sewage sludge is irrelevant to its quality under part 503. EPA also does not consider the placement of sewage sludge in a bag or other container for sale or giveaway to constitute treatment or a change in sludge quality, since the sludge has not been modified with respect to pollutant concentrations, pathogen levels, or vector attraction properties. Thus a person who simply dewaters the sewage sludge, or who places the sewage sludge in a bag or similar enclosure for sale or distribution, would not be a treatment works treating domestic sewage.

If the treatment works generating the sewage sludge transfers sewage sludge to a person who changes the quality of the sewage sludge, the entity changing the quality is a treatment works treating domestic sewage. That entity is not only subject to part 503 standards but is also required to apply for a permit. If, however, the treatment works generating the sewage sludge provides sewage sludge to a person who does not change the quality, the generating treatment works retains the responsibility for the ultimate use or disposal of the sludge and must ensure that the part 503 requirements are met.

Generally, as noted above, facilities other than POTWs that do not change the quality of sewage sludge would not be required to apply for permits. Among such facilities or operations are contract sludge haulers or land appliers. However, as previously explained, EPA retains the authority under section 405(d)(4) of the CWA to take such action as it determines is appropriate to protect public health and the environment from adverse effects from the pollutants in sewage sludge. EPA's current regulations at 40 CFR 122.1(b)(4) provide that the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal as a treatment works treating domestic sewage where necessary to protect public health and the environment from the adverse effects of sewage sludge or to ensure compliance with the sewage sludge technical standards. Exercising this authority, in special circumstances, EPA may conclude that protection of public health and the environment requires a facility or operation to apply for a permit that otherwise would not need one.

The discussion below elaborates upon the foregoing and addresses who must apply for a permit and how other users and disposers might be regulated by use and disposal practice.

Land Application

Land application, under § 503.11 of today's rule, essentially refers to the beneficial use of sewage sludge through placement in or on the soil, in a manner that utilizes the fertilizing and soil conditioning properties of the sewage sludge. The definition of land application covers a number of scenarios. Sewage sludge may be applied to the land in bulk form, directly by the treatment works or by a commercial enterprise. Land application of bulk sewage sludge may take place on land owned by the treatment works or on privately-held land. Sewage sludge may also be packaged and distributed, in some cases after further processing, for sale or give-away to the general public.

Land application may involve any or all of the following parties: The treatment works generating the sewage sludge (or other person who prepares the sewage sludge for application to the land), a distributor of the sewage sludge, a person who applies the sewage sludge to the land, and the owner or leaseholder of the land to which the sewage sludge is applied. In the simplest case, where the treatment works (or a commercial land applier that does not change the quality of the sewage sludge) applies the sewage sludge to land owned by the treatment works, the treatment works retains control over the entire process of sewage sludge generation, treatment, and application to the land. In other cases, the treatment works provides the sewage sludge to another party for further treatment (such as composting) or blending with sewage sludges from other treatment works and by so doing the treatment works at some point effectively relinquishes control over the quality of the sludge.

Subpart B of today's regulation applies to a person who applies sewage sludge to the land, to a person who prepares sewage sludge for application to the land, to the sewage sludge applied to the land, and to the land on which sewage sludge is applied. Any person who generates sewage sludge or who changes the quality of sewage sludge and controls the ultimate use or disposal of sewage sludge is a treatment works treating domestic sewage and must apply for a permit containing sewage sludge conditions. Typically, owners or occupants of land on which sewage sludge is applied are not considered treatment works treating domestic sewage and need not apply for a permit. They would, however, be expected to comply with any standards that apply to management of the site after the sewage sludge is applied (e.g., any access restrictions associated with sewage sludge meeting Class B pathogen requirements).

If the treatment works is the party that applies sewage sludge to the land, the treatment works will be issued a permit that spells out the conditions for land application contained in today's rule. If the treatment works uses a commercial sewage sludge applier that does not change the quality of the sewage sludge for land application, the treatment works will still be held accountable under today's rule and through its permit for the commercial applier's compliance with the part 503 standards, since the Agency considers that the treatment works still retains control over the quality of the sewage sludge. In this case, as the generator of sewage sludge, the treatment works cannot limit its responsibility for the use and disposal of the sewage sludge in compliance with the standards merely by transferring the sludge to a commercial applier. The applier would, however, also be governed directly by the part 503 standards. If the treatment works applies its sewage sludge to the land in another jurisdiction, it may also need to apply for a State or local permit in that jurisdiction (to enable that jurisdiction to impose compliance monitoring and facilitate any necessary enforcement actions). On the other hand, if the treatment works transfers the sewage sludge to another treatment works treating domestic sewage (such as a commercial treatment facility, fertilizer manufacturer, or disposal service), that second treatment works treating domestic sewage would be required to apply for a permit that essentially picks up control where the generating treatment works' permit leaves off.

Subpart B of today's rule includes general requirements, pollutant limits, management practices, pathogen requirements, and vector attraction requirements. As described elsewhere in today's rulemaking, in certain cases a sewage sludge or sewage sludge product that meets certain minimum quality requirements is not required to meet some or all of the controls under part 503. The Agency believes that if sewage sludge (or material derived from sewage sludge) meets these requirements prior to land application, no further controls are needed on the sewage sludge or on the land where the sewage sludge is applied in order to protect public health and the environment from reasonably anticipated adverse effects of pollutants

in the sewage sludge. The rationale for not applying the general requirements and management practices is that sewage sludge that meets the three quality requirements has a comparatively higher value. Because of this, the sludge most likely will not be applied to the land inappropriately (i.e., "wasted"). In addition, the Agency does not expect over application to occur because it could reduce crop yield, which is counter to the main reason to apply sewage sludge to the land. When the sewage sludge meets the three quality requirements, it is a fertilizer material and should be regulated similarly to other fertilizers.

Under § 503.10 of today's rule, the general requirements of § 503.12 and the management practices of § 503.14 do not apply to a bulk or bagged sewage sludge if the sewage sludge meets the pollutant concentrations in § 503.13(b)(2), the Class A pathogen requirements in § 503.32(b), and one of the vector attraction requirements in 503.33(b)(1)–(8). The general requirements and management practices do not apply to a material derived from bulk or bagged sewage sludge if the material meets the minimum concentration, pathogen, and vector attraction requirements. All Subpart B standards, including monitoring, recordkeeping, and reporting requirements are inapplicable to material derived from bulk or bagged sewage sludge, if the sewage sludge used to produce that material meets the minimum concentration, pathogen, and vector attraction requirements described above. The treatment works generating the sewage sludge from which the material is derived remains responsible for any monitoring, recordkeeping, and reporting requirements, however.

After it is generated, sewage sludge generally will be land applied according to one of the following three scenarios: (1) The treatment works (or a commercial applier that does not change the quality of the sewage sludge) applies the sewage sludge to the land (i.e., under the wording of today's rule, the "person who prepares" is also the "person who applies"); (2) the treatment works provides the sewage sludge to another treatment works treating domestic sewage that further changes sludge quality and assumes responsibility for ultimate land application (i.e., the "person who prepares" provides the sewage sludge to another "person who prepares"); or (3) the treatment works demonstrates that the sewage sludge meets certain minimum quality requirements and that, as described above, no further sewage sludge management requirements (except for certain monitoring, recordkeeping and reporting requirements) apply.

An explanation for each scenario follows:

(1) If the treatment works applies its sewage sludge to the land (or sends it to a commercial applier that does not change the quality of the sludge), the treatment works retains direct control over the quality of the sewage sludge and is responsible for ensuring that the part 503 standards are met. In its permit application, the treatment works must announce its intent to apply its sewage sludge to the land either directly or through the use of a commercial applier. In the permit application, the treatment works must either identify all land application sites in advance, or submit a copy of its land application plan, which includes the geographical area covered, the site selection criteria, site management practices, and a provision for public notice (including at a minimum notice to the permitting authority and adjacent landholders) (§ 501.15(a)(2)(ix)).

The permit issued to the treatment works will contain the part 503 requirements that address the land application practices described in the permit application. EPA has determined that, when Congress amended section 405(e) to extend the obligation to comply with the sludge standards to each person using or disposing of sewage sludge, Congress did not intend to limit or transfer the responsibility of the generating POTW for ensuring compliance with the standards except insofar as the generating POTW sends the sewage sludge to another treatment works treating domestic sewage. In other words, a treatment works generating sewage sludge retains its duty to comply with the sewage sludge use and disposal standards except where it transfers its sludge to another treatment works treating domestic sewage that is itself subject to permitting requirements under section 405(f) of the CWA.

The treatment works generating the sewage sludge must apply for a permit and must identify, in the permit application, the person(s) who will apply sewage sludge to the land. In its application, the treatment works generating the sewage sludge must also identify the land application sites or submit a land application plan. EPA expects that although the treatment works generating the sewage sludge does not actually apply the sewage sludge to the land, the treatment works generating the sewage sludge will exert sufficient control over the land applier to enable the applier to comply with the part 503 standards. For this reason, § 503.12 requires the treatment works to provide the applier with the information necessary to comply with the standards.

Since under this scenario the land applier does not treat the sewage sludge or otherwise change sludge quality, the land applier is not a treatment works treating domestic sewage and is not required to apply for a permit. In this case the part 503 standards apply directly to the land applier. The permit issued to the treatment works generating the sewage sludge must contain sufficient controls to ensure that the treatment works informs the land applier of what requirements must be met, and that the treatment works is held responsible for compliance with part 503 by the land applier.

Certain part 503 requirements apply to the treatment works generating the sewage sludge, and certain requirements apply to the land applier. Generally, they can be summarized as follows:

- Under § 503.12, the generating treatment works must provide both the land applier and the site owner with the information necessary to comply with part 503.
- The generating treatment works must ensure that the sewage sludge meets the pollutant limits in § 503.13.
- The sewage sludge must be applied to the land in accordance with the management practices in § 503.14. The treatment works generating the sewage sludge will be responsible for informing the land applier of applicable management practices, and the land applier will be responsible for compliance with those management practices.
- The generating treatment works is responsible for providing all necessary treatment to meet the pathogen and vector attraction requirements in § 503.15. The land applier and site owner will together be responsible for carrying out any necessary site access restrictions.
- The generating treatment works must monitor the sewage sludge according to the requirements in § 503.16.
- The generating treatment works must keep records as required in § 503.17.
- The generating treatment works must report to the permitting authority as required in § 503.18 if it is a Class I sludge management facility or if it is required to do so in its permit. (Conceivably, a land applier could be designated by the permitting authority as Class I or otherwise subject to reporting.)

(2) Under the second scenario, the sewage sludge is not applied to the land by the treatment works generating the

sewage sludge, but it is provided to a person who provides further treatment or otherwise changes the quality of the sewage sludge (i.e., another "person who prepares"). The person who changes the quality of the sewage sludge may apply it to the land in bulk form, place it in a bag or similar enclosure for sale or distribution to the public, or provide it to another facility for further distribution and marketing.

Both the treatment works generating the sewage sludge and the person who changes the sewage sludge quality must apply for a permit. In its permit application, the generating treatment works must identify the person who will change the quality of the sewage sludge; under § 503.12, it must provide that person with the information necessary to comply with part 503. The person who changes sewage sludge quality must comply with the part 503 requirements in its permit (or, pending permit issuance, with part 503 directly).

(3) Certain part 503 requirements are inapplicable to the treatment works generating the sewage sludge if the sewage sludge meets certain minimum criteria regarding pollutant concentrations, pathogen levels, and vector attraction properties. If the sewage sludge (or the material derived from sludge) meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen reduction requirements in § 503.32(a), and one of the vector attraction requirements of § 503.33 (b) (1)–(8), the treatment works generating the sewage sludge not required to meet the general requirements of § 503.12 and the management practices of § 503.14. Furthermore, if a material is derived from a sewage sludge that meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen reduction requirements in § 503.32(a), and one of the vector attraction requirements of § 503.33 (b) (1)–(8), the material is not required to meet the subpart B requirements, including monitoring, recordkeeping, and reporting requirements.

Surface Disposal

Surface disposal, under today's regulation, is the placement of sewage sludge on an area of land dedicated to the disposal of sewage sludge and containing one or more active "sewage sludge units." A surface disposal site is, by definition, a treatment works treating domestic sewage. Subpart C of today's rulemaking applies to any person who prepares sewage sludge for placement on a surface disposal site, to the owner/operator of a surface disposal site, to the sewage sludge placed on a surface disposal site, and to a surface disposal site.

As a treatment works treating domestic sewage, a surface disposal site is subject to permitting requirements under part 122, 124 or 501. If a surface disposal site is owned or operated by the treatment works generating the sewage sludge (i.e., the "person who prepares"), the part 503 requirements for the disposal site will be contained in the permit issued to the generating treatment works. If, however, the surface disposal site is owned or operated by another party, both parties must apply for permits containing applicable part 503 requirements. Applicable requirements are in subpart C of part 503 and consist of general requirements (§ 503.22); pollutant limits (§ 503.23); management practices (§ 503.24); pathogen and vector attraction requirements (§ 503.25); and monitoring, recordkeeping, and reporting requirements (§§ 503.26–503.28).

Incineration

Subpart E of today's regulation applies to any person who fires sewage sludge in a sewage sludge incinerator, to sewage sludge fired in a sewage sludge incinerator, and to a sewage sludge incinerator. Subpart E includes general requirements (§ 503.42); pollutant limits (§ 503.43); operational standards (§ 503.44); management practices (§ 503.45); and monitoring, recordkeeping, and reporting requirements (§ 503.46 through § 503.48). Under § 503.43, site-specific variables (incinerator type, dispersion factor, control efficiency, feed rate, stack height) must be used to calculate allowable daily concentrations of arsenic, cadmium, chromium, lead, and nickel in the sewage sludge fed to the incinerator.

A sewage sludge incinerator is considered to be a treatment works treating domestic sewage under 40 CFR 122.2 and therefore must obtain a permit. If, as is mostly the case, a sewage sludge incinerator is operated by the treatment works generating the sewage sludge, the permit issued to the generating treatment works will contain the part 503 requirements applicable to its sewage sludge incinerator. In those instances where a treatment works generating sewage sludge sends its sewage sludge to another sewage sludge incinerator, the permit issued to the generating treatment works would generally contain standard conditions. The sewage sludge incinerator's permit, meanwhile, would include the sewage sludge pollutant limits, emission limits, operational standards, and management practices required by the part 503 incinerator standards.

Septage Haulers

Domestic septage is considered sewage sludge under today's rule; therefore, users and disposers of domestic septage must comply with the standards applicable to their use or disposal practices. However, EPA generally does not expect to issue permits to septage haulers because they are not considered to be treatment works treating domestic sewage (unless specifically designated by the Regional Administrator). (54 FR 18726, May 2, 1989). Instead, EPA will rely on the direct enforceability of today's rule to implement the standards with respect to septage haulers.

Septage haulers will be required to keep records of basic information about their use and disposal practices. (Note: Septage taken to a POTW for treatment is not considered use or disposal and, therefore, is not covered by today's standards.) The person applying the domestic septage to the land must comply with requirements for annual application rate (§ 503.13(c)), pathogen and vector attraction (§ 503.15 (b) and (d)), monitoring (§ 503.16(b)), and recordkeeping (§ 503.17(b)). (Alternately, the person applying the domestic septage may comply with the subpart B requirements for sewage sludge unless specifically indicated otherwise. Because the sewage sludge standards are more stringent, EPA does not expect many septage haulers to select them.)

Surface disposal of domestic septage is subject to the vector attraction requirements of subpart D. Under § 503.26, each container of domestic septage placed on a sewage sludge unit shall be monitored for compliance with the vector attraction requirement of § 503.33(b)(12), if the vector attraction requirement in § 503.33(b)(12) is met when domestic septage is placed on an active sewage sludge unit.

Permit Application Requirements

Currently, under §§ 122.22(c)(2)(i) and 501.15(d)(1)(ii)(A) of the sewage sludge permit program regulations, any POTW or other treatment works treating domestic sewage with an existing NPDES permit must submit sewage sludge permit application information when its next application for NPDES permit renewal is due, or within 120 days of promulgation of an applicable part 503 standard for sewage sludge use or disposal, whichever comes first. If a treatment works treating domestic sewage is not subject to the NPDES permitting program (i.e., it is a "sludge

only facility"), it is required under §§ 122.21(c)(2)(ii) and 501.15(d)(1)(ii)(B) to submit permit application information within 120 days of promulgation of an applicable part 503 standard or upon request of the Director. If a treatment works treating domestic sewage commences operation after promulgation of an applicable part 503 standard, it is required under §§ 122.21(c)(2)(iii) and 501.15(d)(1)(ii)(C) to submit a permit application at least 180 days prior to the date proposed for commencing operations.

EPA estimates that approximately 16,000 POTWs are in operation nationwide and that between 3,000 and 5,000 other facilities also meet the definition of treatment works treating domestic sewage because they exert control over the quality or disposal of sewage sludge. Under existing regulations, therefore, up to 20,000 POTWS and other treatment works treating domestic sewage would be expected to submit sewage sludge permit application information by June 21, 1993.

On May 27, 1992, EPA proposed a phased approach to the submittal of sewage sludge permit applications, which would reduce the number of applications received during the period immediately following promulgation of the part 503 standards. (57 FR 22197). EPA proposed this approach to manage permit applications more efficiently and to prioritize permitting activities among different types of facilities and sewage sludge use or disposal activities. EPA expects to promulgate the revised permit application requirements after promulgation of these standards.

Under the phased approach, as proposed in EPA's May 27, 1992 notice, the Agency would only require sewage sludge permit applications during the initial period following promulgation of part 503 from treatment works treating domestic sewage that are expected to have site-specific pollutant limits in their permits. Certain treatment works treating domestic sewage are required to have site-specific permit limits. Other treatment works treating domestic sewage may request site-specific permit limits under certain circumstances, as discussed below.

Site-specific permit limits are required for sewage sludge that is fired in a sewage sludge incinerator or placed on certain types of surface disposal sites. Applicants intending to incinerate sewage sludge in sewage sludge incinerators are required, under § 503.43 of today's rule, to use site-specific variables (incinerator type, dispersion factor, control efficiency, feed rate, stack height) to calculate allowable daily concentrations of arsenic, cadmium, chromium, lead, and nickel in the sewage sludge fed to the incinerator. Pollutant limits for surface disposal sites may be calculated on a site-specific basis where the site-specific parameters at the site are different from the national model (§ 503.23(b)). Under the proposed application deadline rule, requests for site-specific limits will be considered beyond the first round of permit applications only for good cause. Good cause includes instances where an applicant does not have information when the part 503 standards are promulgated to indicate that site-specific pollutant limits will be necessary (e.g., it changes use or disposal practices).

For treatment works treating domestic sewage that currently have NPDES permits and will not need site-specific pollutant limits, the sewage sludge information would be submitted when their applications for permit renewal are due. Sludge-only facilities (i.e., those without existing NPDES permits) would submit a subset of application information within one year after promulgation of an applicable part 503 use or disposal standard. Based on this information, the permitting authority would be able to determine whether additional information was needed and whether to issue a permit.

In its May 27, 1992 notice EPA also proposed to extend the time period over which permit applications must be submitted by these "first phase" facilities, from within 120 days after promulgation of part 503 to within 180 days after promulgation of part 503, to provide adequate time for applicants to compile necessary information.

Application Information Required.

Application requirements related to sewage sludge use or disposal were established by the May 2, 1989, sewage sludge permit program regulations. Section 122.21(c)(2) requires all treatment works treating domestic sewage to submit sewage sludge permit application information to the director. Section 122.21(d)(3)(ii) specifies which information must be submitted, namely, the information at § 501.15(a)(2).

Section 501.15(a)(2) requires two types of information: general facility information (paragraphs (i)–(vi)) and information on sewage sludge use and disposal practices (paragraphs (vii)–(xii)). The information requirements are as follows:

(2) *Information requirements.* All treatment works treating domestic sewage shall submit to the Director within the time frames established in paragraph (d)(1)(ii) of this section the following information:

(i) The activities conducted by the applicant which require it to apply for a permit;

(ii) Name, mailing address, and location of the treatment works treating domestic sewage for which the application is submitted;

(iii) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity;

(iv) Whether the facility is located on Indian lands;

(v) A listing of all permits of construction approvals received or applied for under any of the following programs:

(A) Hazardous Waste Management program under RCRA.

(B) UIC program under SDWA.

(C) NPDES program under CWA.

(D) Prevention of Significant Deterioration (PSD) program under the Clean Air Act.

(E) Nonattainment program under the Clean Air Act.

(F) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.

(G) Ocean dumping permits under the Marine Protection, Research, and Sanctuaries Act.

(H) Dredge or fill permits under section 404 of CWA.

(I) Other relevant environmental permits, including State or local permits.

(vi) A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the treatment works treating domestic sewage, depicting the location of the sludge management facilities (including disposal sites), the location of all water bodies, and the location of wells used for drinking water listed in the public records or otherwise known to the applicant within ¼ mile of the property boundaries;

(vii) Any sludge monitoring data the applicant may have, including available ground water monitoring data, with a description of the well locations and approximate depth to ground water, for landfills or land application sites (see appendix I to 40 CFR part 257);

(viii) A description of the applicant's sludge use and disposal practices (including, where applicable, the location of any sites where the applicant transfers sludge for treatment and/or disposal, as well as the name of the applier or other contractor who applies the sludge to land if different from the applicant, and the name of any distributors when the sludge will be disposed of through distribution and marketing, if different from the applicant);

(ix) For each land application site the applicant will use during the life of the permit, the applicant will supply information necessary to determine if the site is appropriate for land application and a description of how the site is (or will be) managed. Applicants intending to apply sludge to land application sites not identified at the time of application must submit a land application plan which at a minimum:

(A) Describes the geographical area covered by the plan;

(B) Identifies site selection criteria;

(C) Describes how sites will be managed;

(D) Provides for advance notice to the permit authority of specific land application sites and reasonable time for the permit authority to object prior to the sludge application; and

(E) Provides for advance public notice as required by State and local law, but in all cases requires notice to landowners and occupants adjacent to or abutting the proposed land application site.

(x) Annual sludge production volume;

(xi) Any information required to determine the appropriate standards for permitting under 40 CFR part 503; and

(xii) Any other information the Program Director may request and reasonably require to assess the sludge use and disposal practices, to determine whether to issue a permit, or to ascertain appropriate permit requirements.

For purposes of today's rule and permit applications triggered by promulgation of today's rule, the most significant information requirement is the requirement in paragraph (xi) to submit "any information required to determine the appropriate standards for permitting under 40 CFR part 503." The information requirements related to the part 503 standards were kept general in the May 2, 1989, rule because part 503 had not yet been promulgated. Today's rule establishes more specific information requirements for each use and disposal practice. Permit applicants must identify their chosen use and disposal practices and submit information which will enable the permitting authority either to determine compliance with the standards or to derive site-specific pollutant limits where the applicant seeks site-specific limits as provided in today's rule. EPA expects to issue additional guidance detailing what information is needed for each use and disposal practice. EPA also is in the process of revising the NPDES application form for POTWs, which will include requirements for submitting sewage sludge use and disposal information. (Prior to rulemakings affecting application forms, EPA intends to issue interim application guidance to facilitate the collection of this information.) EPA does not anticipate issuing or reissuing permits to all existing POTWs and other treatment works treating domestic sewage at one time. This approach, which was in the proposed permitting rule, was abandoned as impractical given the severe resource burden that would result. Instead, EPA expects that all permits reissued after promulgation of part 503 will contain today's standards and that other permits will be reopened to incorporate today's standards as described in the discussion below on permitting priorities. The permitting authority will use information submitted with the application (as well as from other sources, such as monitoring data submitted under the interim permitting strategy or pursuant to a POTW's pretreatment program) to determine whether to issue a permit or revoke and reissue an existing EPA-issued NPDES permit to incorporate today's standards.

As discussed later in the section on who issues the permit, EPA expects to be the permitting authority initially. Therefore, all applications should be submitted to the appropriate EPA Regional office unless the applicant is notified otherwise by EPA.

Permitting Priorities

The process of developing and issuing permits provides the permitting authority an opportunity to evaluate each facility's use and disposal practice(s) and to develop permit conditions incorporating part 503 standards as well as additional requirements, either as required by parts 122 or 501 or as tailored to site-specific circumstances (e.g., more frequent monitoring). Permit issuance also provides additional certainty to the permitted facility of its legal obligations, and compliance with permit terms may provide a defense against actions based on violations of the part 503 standards (see 40 CFR § 122.5 and preamble discussion at 54 FR 18735, May 2, 1989). Thus, permits will be the primary mechanism for implementing the national sewage sludge program in the long run.

As discussed above, EPA has determined that it is not feasible to develop and issue permits to the estimated 16,000 to 20,000 treatment works treating domestic sewage which may be subject to the part 503 standards. Consequently, EPA has proposed revisions to parts 122 and 501 to allow phased submission of permit applications over time (57 FR 22197, May 27, 1992). Permitting authorities must establish priorities for permit issuance based on consideration of the nature of the universe of facilities ultimately required to have the part 503 standards reflected in permits.

Today's rule does not establish priorities for issuance of permits to treatment works treating domestic sewage. Nonetheless, today's rule, in combination with existing policies and regulations, will allow permitting authorities to establish permitting priorities.

The Sewage Sludge Interim Permitting Strategy (September 1989) recommended that the following types of POTWs be considered priorities for purposes of interim sewage sludge permitting: Class I sludge management facilities (as defined by 40 CFR 122.2); POTWs that fire sewage sludge in a sewage sludge incinerator; and POTWs with known or suspected problems with their sewage sludge quality or sludge use or disposal practices.

EPA encourages permitting authorities to establish permitting priorities to implement part 503 standards similar to those established by the interim strategy, but modified in consideration of today's rule. In general, the general requirements, management practices, pollutant limitations, pathogen and vector requirements, and monitoring, recordkeeping, and reporting requirements in today's rule will apply in the absence of permits. The exception would be those facilities that either require or seek site-specific pollutant limitations as provided in today's rule.

EPA believes that sewage sludge permitting priorities should be established as follows. In the first round of permitting following today's rule, permitting authorities should rely to the maximum extent possible on the self-implementing aspects of the part 503 standards. Permits should be issued during the initial period after part 503 is published to those treatment works treating domestic sewage in the following high-priority categories, for which the Agency believes self-implementation is not sufficient: Sewage sludge incinerators; surface disposal sites requiring or requesting site-specific permit limits; facilities designated by the permitting authority as posing a threat to human health and the environment and that need to be fully evaluated in the context of permit development; facilities for which a permit is deemed necessary to fully support or promote beneficial use; and facilities whose NPDES permits come up for reissuance during the course of the normal five-year permit cycle.

EPA considers sewage sludge incinerators a high priority for permit issuance for two principal reasons. First, sewage sludge incinerators present a wider exposure to sewage sludge pollutants and therefore, are presumed to pose a greater potential threat to public health and the environment than other use or disposal methods. In addition, some of the requirements for sewage sludge incinerators can only be fully applied on a case-specific basis (e.g., allowable pollutant concentrations for sludge fed to incinerators must be calculated from results of air dispersion models and control efficiencies of the unit). Similarly, certain surface disposal

sites under subpart C will be required to apply for site-specific permit limits, and these are being targeted for immediate attention as part of the first phase of permit applications.

Treatment works treating domestic sewage that have been designated by the permitting authority as posing a threat to public health and the environment should also be considered a high priority for submission of application information and for permitting during the initial period following the effective date of today's rule. Although the part 503 technical standards are designed to protect public health and the environment, EPA envisions certain cases where it may be necessary for the permitting authority to work closely with the treatment works treating domestic sewage to ensure that the technical standards are properly applied and reinforced in the context of permit development and issuance. For example, where the treatment works treating domestic sewage must build new pollution control facilities to meet the standards, the permit can establish compliance schedules (see § 122.47). (Note, however, that no compliance schedule can extend the compliance deadline established under section 405(d)(2)(D) of the CWA.)

EPA believes that for certain treatment works treating domestic sewage, permit issuance will help promote beneficial use and is, therefore, establishing a high priority for addressing these facilities. For such facilities, the additional certainty provided by a permit may aid in reinforcing the requirements of the applicable technical standards and may act to reassure other parties or members of the general public that the beneficial use of sewage sludge is in strict accordance with the part 503 technical standards.

Finally, all facilities whose NPDES permits come up for reissuance during the normal permit cycle should include applicable sewage sludge standards in their permits. In addition to the above-described categories, a large number of sludge-only permits may be issued in the first permit cycle following promulgation of the part 503 standards. The priority in which these facilities are addressed will be based on the permitting authorities' determination of the threat posed to public health and the environment by these facilities' sludge use or disposal.

Requirements in the Absence of a Permit

Most requirements in today's standards are fully enforceable and can be easily understood and applied without translation into permit conditions. Compliance with the standards will be verified through the review of self-monitoring information and through inspection of facility records required to be created and maintained by the rule. However, because some standards may be established or adjusted based on site-specific factors, identification of which standards apply is necessary while development of these site-specific requirements is pending (e.g., after a permit application has been submitted but before issuance of a permit).

The part 503 standards comprise several sets of requirements for each use and disposal method: general requirements, management practices, pollutant limits, pathogen and vector attraction requirements, monitoring requirements, recordkeeping requirements, and reporting requirements. The standards applicable to each use and disposal practice are described in detail in this rule. In practice, most facilities will be able to determine from today's rule which specific pollutant concentrations apply to their use or disposal practices. In addition, facilities will be able to determine other applicable requirements such as management practices (e. g., to prevent sewage sludge applied to land from entering waters of the U.S.), monitoring requirements based on the amount of sewage sludge used or disposed, and recordkeeping designed to track the various use or disposal practices.

In the case of sewage sludge incinerators, today's rule does not establish national, uniform pollutant limits for sludge quality; instead, these limits are developed based on site specific factors. Similarly, under certain circumstances, pollutant limits for surface disposal sites must be developed based on site-specific factors. Today's rule also allows adjustment to national uniform pollutant limits for certain surface disposal practices if established in a permit. In all cases where site-specific standards are mandated or sought, the treatment works treating domestic sewage must submit a permit application with complete and accurate information supporting the site-specific pollutant limits. Submission of such applications does not relieve the applicant of the responsibility to comply with all other applicable portions of today's rule. In addition, as a matter of policy, the applicant must meet those numerical pollutant levels which appear in its application for site-specific pollutant concentrations during the period after submission of a complete permit application but prior to the issuance of a permit containing site-specific limits.

Who Issues the Permit

As discussed above, EPA is responsible for issuing permits that implement the technical standards for sewage sludge use and disposal unless those standards are implemented through certain other Federal permits or permits issued by a State with an EPA approved sludge management program. Currently, the only Federal program listed in section 405(f) with comparable permits is the Subtitle C program under RCRA. Today's rule adopts Subtitle C requirements as standards under section 405(f). Thus, sewage sludge that is a hazardous waste and facilities accepting such sludge will continue to be regulated under Subtitle C of RCRA. None of the other listed Federal permit programs is expected to implement the standards for sewage sludge use or disposal promulgated today.

As discussed previously, today's standards may also be implemented through permits issued by State programs approved by the Administrator as adequate to assure compliance with section 405 of the CWA. Under the May 2, 1989 regulations, States may seek approval of a modified NPDES program (Part 123) or a separate, non-NPDES program (Part 501). The basic requirements for either approach are essentially the same. Approved State programs will share several important features with an EPA administered program: authority to issue and enforce permits to POTWs and other treatment works treating domestic sewage that implement the Federal technical standards and other requirements for sewage sludge use and disposal; authority to enforce the technical standards against any user or disposer of sewage sludge; and general authority to take action to protect public health and the environment from any reasonably anticipated adverse effects of sewage sludge use and disposal.

Currently, no States have received EPA approval of their State sludge management programs. At least initially, EPA Regions will be responsible for implementing the technical standards promulgated today in all States using the permitting requirements and procedures in 40 CFR parts 122 and 124. Where EPA is the NPDES permitting authority, it will implement the standards through NPDES permits. Where a State has an approved NPDES program, EPA must issue a separate NPDES or sludge-only permit to implement the standards. (EPA is considering issuing guidance on joint issuance of permits in States with

approved NPDES programs). EPA may choose to issue general permits for sewage sludge use and disposal as an alternative to the requirement to impose sewage sludge conditions in individual permits. However, until States seek and apply for program approval, dual State and Federal permitting programs may be in effect. EPA encourages States to seek program approval as soon as possible and has published a State Sludge Management Program Guidance (EPA 1990) to assist their efforts.

The permitting program focuses primarily on generators of sewage sludge. Thus, in most cases the permitting authority will be the Region or State in which the treatment works treating domestic sewage is located. The sewage sludge from these facilities that is transported to another State will have to meet any part 503 requirements related to the use or disposal site unless the sludge is transferred to a treatment works treating domestic sewage. In this case, the receiving treatment works treating domestic sewage must apply for a permit and comply with part 503 standards. When a generating treatment works sends its sludge out of state to a user or disposer not defined or designated as a treatment works treating domestic sewage, the receiving State or local jurisdiction, may, but need not, issue a permit. (Some States under their own laws and programs require sludge exporters to obtain any necessary approvals from importing States, although this currently is not required by Federal regulation. Today's rulemaking does, however, require notification to the permitting authority in the receiving State in cases where bulk sewage sludge is sent out of State.)

EPA administration of the new sewage sludge permitting program will not displace existing State sewage sludge management programs (unless a State so chooses by seeking EPA approval of its program). Likewise, under section 510 of the CWA, States may impose more stringent requirements than those promulgated in today's technical standards and those in the permitting requirements and State program rule. However, more stringent State requirements generally will not be considered a part of the Federal program (i.e., they may not be Federally enforceable and would not be considered a part of an EPA-approved State sludge management program). The only exception will be where an EPA permit writer makes a determination in an individual permit proceeding that, in the particular special circumstances more stringent State requirements are necessary to protect public health and the environment as provided in section 405(d)(4) of the CWA.

EPA encourages States to adopt the part 503 standards as part of State law. The part 503 standards result from years of data gathering and analysis and represent a comprehensive and extensive evaluation of the fate and effect of sewage sludge in the environment. Today's standards have undergone extensive scrutiny by the public and scientific community. Adoption of the part 503 standards as a minimum baseline for sewage sludge use or disposal will protect public health and the environment. In addition, widespread adoption of part 503 standards would facilitate beneficial use of sewage sludge (biosolids) by establishing uniform standards from State to State.

Implementation Strategy

EPA has developed and is carrying out an overall strategy to help ensure that today's rule is implemented expeditiously and in a manner that protects public health and the environment. This strategy includes a commitment to conduct public outreach to ensure that the regulated community and the public have an opportunity to become familiar with the part 503 standards and to ask questions regarding the implementation and enforcement of the rule.

As indicated previously, the Agency will rely heavily on the self-implementing nature of the part 503 standards during the initial period after promulgation and will phase in permits incorporating the standards over a 5-year period. To familiarize affected facilities with the part 503 requirements applicable to them before standards are incorporated into their permits, EPA will mail informational material on the standards and permit application requirements directly to treatment works treating domestic sewage. Outreach will also include co-sponsoring public workshops with several national trade associations, making presentations at various other conferences, and responding to individual inquiries.

Another key element of EPA's implementation strategy will be educating EPA and State personnel on the new standards. This effort will entail training courses and issuance of guidance documents and other materials covering various aspects of implementation. For example, EPA will issue a permit writer's guidance, updating the Guidance for Developing Case-by-Case Permit Conditions for Municipal Sewage Sludge issued by EPA in 1990. The new guidance document will provide direction for incorporating the part 503 technical standards into permits. In addition, the Agency will develop and issue various documents (and, in some cases, revisions to existing materials) covering the compliance and enforcement components of its sludge implementation strategy.

Part XIII: Benefits and Costs of the Amendments to Parts 257 and 403 and the Final Part 503 Regulation

Data used to calculate estimates reported in this preamble are detailed in the Regulatory Impact Analysis (RIA). This work relies heavily on data collected during the National Sewage Sludge Survey but it is also augmented, as appropriate, by relevant data from the 1988 Needs Survey and other available sources of information.

The data presented here differ from that presented in the 1990 Notice of Data Availability for several reasons. First, the final regulatory definitions for use or disposal practices were developed after publication of the notice and these regulatory definitions are somewhat different than those definitions used in development of the survey and publication of the notice. For example, the practices of land application and distribution and marketing were combined under one definition. Second, detailed analyses conducted after publication of the notice indicated that responses meeting case by case quality control checks did not appear to be correct when considered in relation to responses at other POTWs. For example, survey responses for the amount of sewage sludge used or disposed were investigated for several POTWs after comparison of responses with those of POTWs with similar flow rates indicated a potential problem. These investigations are documented in the "Statistical Support Document for the 40 CFR part 503 Rule for Sewage Sludge Use or Disposal". Third, the statistical weighting scheme for the survey was not fully implemented when the notice was published; those summary statistics not using the weighting scheme were presented by reported flow group. Finally, the summary statistics published in the notice were based on information from the NSSS. The NSSS was only designed to cover POTWs that practice secondary and better wastewater treatment. However, this regulation also covers POTWs that only practice primary treatment, privately owned treatment works, Federally owed treatment works, and domestic septage haulers.

This part of the preamble discusses the benefits and costs of the amendments in today's rulemaking to Parts 257 and 403 and the benefits and costs of the final part 503 regulation. More details on the benefits and costs of the final part 503 regulation are presented in the Regulatory Impact Analysis for the part 503 Regulation (see Part XIV for information on how to obtain a copy).

This part of the preamble is divided into three sections. The first and second sections provide information on the generation of sewage sludge and the use or disposal of sewage sludge, respectively. The third section discusses the benefits and costs of the amendments to parts 257 and 403 and the benefits and costs of the final part 503 regulation.

Generation of Sewage Sludge

The Clean Water Act requires that municipal wastewater meet certain requirements before it can be discharged to the nation's waters. To meet those requirements, the wastewater usually must be treated. Solid, semi-solid, and liquid residues generated during wastewater treatment must be used or disposed properly. These residues must be managed properly through final use or disposal.

Municipal wastewater contains materials discharged into household drains through toilets, sinks, and tubs. These materials are domestic sewage. Components of domestic sewage include soaps, shampoos, human excrement and tissue, food stuffs, detergents, pesticides, household hazardous waste, and oil and grease. Typically, a family of four generates 300 to 400 gallons of domestic sewage wastewater per day.

Domestic sewage may be treated (or partially treated) at its source in such devices as septic tanks and portable toilets or domestic sewage may be treated in publicly owned, privately owned, or federally owned treatment works. A treatment works may treat domestic sewage alone or in combination with liquid industrial wastewater. Residues generated during the treatment of domestic sewage are, by definition, sewage sludge.

Treatment works treat municipal wastewater to a certain level of treatment (i.e., primary, secondary, or tertiary). Each level of treatment results in greater amounts of sewage sludge.

Primary treatment processes remove the solids that settle out of the wastewater by gravity. This level generates 2,500 to 3,500 liters of sewage sludge per million liters of wastewater treated. Primary sewage sludge contains 3 to 7 percent solids, 60 to 80 percent of which is organic matter. The water content of primary sewage sludge can easily be reduced by dewatering the sewage sludge.

Secondary treatment produces a sewage sludge generated by biological treatment processes. These processes (e.g., activated sewage sludge systems and trickling filters) use microbes to break down and convert the organic substances in the wastewater to microbial residue. Biological treatment processes remove up to 90 percent of the organic matter in the wastewater and produce a sewage sludge that typically contains from 0.5 to 2 percent solids. Sewage sludges produced during secondary treatment generally are more difficult to dewater than are primary sewage sludges. The organic content of secondary treatment sewage sludge ranges from 50 to 60 percent. Secondary treatment processes increase the volume of sewage sludge generated over the volume generated in primary treatment by 15,000 to 20,000 liters of sewage sludge per million liters of wastewater.

Advanced wastewater treatment processes (e.g., chemical precipitation and filtration) also increase the volume of sewage sludge to be used or disposed. In chemical precipitation, chemicals are added to the wastewater to remove organic materials and nutrients and to separate the solids from the wastewater. Characteristics of these sewage sludges vary, depending on the type of advanced treatment process used and the characteristics of the wastewater in the influent to the treatment process. The solids content of advanced treatment sewage sludges varies from 0.2 to 1.5 percent, while the organic content of the sewage sludge ranges from 35 to 50 percent.

Advanced treatment increases the volume of sewage sludge generated over the volume generated during secondary treatment by 10,000 liters of sewage sludge per million liters of wastewater. Before dewatering, sewage sludge contains from 93 to 99.5 percent water. The remaining portion is the solids and dissolved material removed from the wastewater, added in the treatment process, or cultured by the wastewater treatment process. Virtually all sewage sludges contain nutrients (e.g., nitrogen, phosphorus) and pathogens (e.g., bacteria, viruses, protozoa, and viable helminth ova). Some sewage sludges also contain more than trace amounts of organic chemicals (e.g., chloroform) and inorganic chemicals (e.g., iron). These pollutants occur in domestic sewage, industrial wastewater discharge to municipal sewers, and runoff from parking lots and other areas that enters the sewers.

Before using or disposing of sewage sludge, treatment works generally thicken, stabilize, and dewater the sewage sludge. This thickening is a process in which water from the sewage sludge is removed to achieve a volume reduction. The reduction in sewage sludge volume decreases the capital and operating costs of subsequent sewage sludge processing and use or disposal practices by decreasing the volume of sewage sludge to be processed. For example, lowering the volume of sewage sludge to be used or disposed reduces transportation costs. EPA estimates that the cost to transport sewage sludge with a 22 percent solids content over a 20-mile trip is about one-half the cost to transport sewage sludge with a 6 percent solids content over the same distance.

Treatment works frequently digest sewage sludge to reduce the level of pathogens and odors. The degree to which a sewage sludge is processed is very important when it is applied to land or placed on a surface disposal site.

Use or Disposal of Sewage Sludge

Three of the more common use or disposal practices for sewage sludge are application to the land, placement on a surface disposal site, and firing in a sewage sludge incinerator. Sewage sludge is applied to the land either to condition the soil or to fertilize crops or vegetation grown on the land. In contrast, sewage sludge is placed on the land in surface disposal for final disposal. In most cases, crops are not grown on surface disposal sites. In incineration, the organic and inorganic materials in sewage sludge are combusted in the incinerator.

As mentioned previously, the purpose of applying sewage sludge to the land is to condition the soil using the organic material in the sewage sludge or to fertilize crops or vegetation grown on the land. Approximately 33 percent of the sewage sludge used or disposed annually is applied to land. The method of applying sewage sludge to the land depends on the physical characteristics of the sewage sludge (e.g., liquid or dried) and the site conditions. Liquid sewage sludge can be applied with tractors, tank wagons, irrigation systems, or special application vehicles. Liquid sewage sludge also can be injected under the surface layer of the soil. Dewatered sewage sludge, on the other hand, typically is applied to the land by equipment similar to that used for applying limestone, animal manures, or commercial chemical fertilizers. Generally, the dewatered sewage sludge

is applied to the land surface and then incorporated by plowing or disking, except when applied to pasture. Sewage sludge is applied to areas such as agricultural land, forest, public contact sites, reclamation sites, lawns, and home gardens.

Sewage sludge is a valuable source of fertilizer when applied to agricultural land. Results of a study of sewage sludge and effluent use on selected agricultural crops in one area of Oregon found that the return per acre associated with sewage sludge application ranged from a loss of $6 to an increase of $15 per acre when compared to traditional fertilizer sources. The return per acre depended on crop rotation, previous soil management practices, soil type, and level of sewage sludge application. The savings were net savings in the cost of fertilizers, taking into account the fact that the sewage sludge was available at no cost to the farmer (Reference No. 10).

Sewage sludge has been applied to forests, at least on an experimental field-scale level, in 10 or more States. The most extensive experience with this practice is in the pacific Northwest. Liquid sewage sludge is most often sprayed from mobile equipment into established forest stands. Application of sewage sludge to forest shortens wood production cycles by accelerating tree growth, especially on marginally productive soils. Results of studies at the University of Washington on the use of sewage sludge as a fertilizer in silviculture operations show height increases of up to 1,190 percent and diameter increases of up to 1,250 percent compared with controls in certain tree species. These results have also shown that trees grow twice as fast on sewage sludge-amended soil. Thus, a tree that typically would be cut after 60 years could be cut after only 30 years.

If sewage sludge is used to stabilize and revegetate land at a reclamation site, typically large amounts of sewage sludge (usually 50 to 100 or more metric tons per hectare) are applied to the site on a short-term basis. Sewage sludge may be applied only one time or may be applied as many as two to three times. A large amount of sewage sludge is applied to a reclamation site to provide the amount of organic matter needed to establish a self-sustaining ecosystem.

Costs to reclaim land with sewage sludge are comparable to the costs of land reclamation using other commercial materials. For example, in a strip-mined area in Fulton County, IL, sites reclaimed using sewage sludge cost $3,660 an acre; costs for sites reclaimed using other commercial materials range from $3,395 to $6,290 an acre. Other examples include the use of Philadelphia's sewage sludge to reclaim more than 3,000 acres of devastated lands in Pennsylvania and the use of sewage sludge, in combination with fly ash, to revegetate contaminated soils in Palmerton, PA.

Sewage sludge may be placed on the land for final disposal. Land where the sewage sludge is placed for this purpose is a surface disposal site. The surface disposal site may contain a series of trenches, dug into the ground, into which dewatered sewage sludge is deposited. Sewage sludge also may be placed on the land surface (e.g., a sewage sludge pile). In surface disposal, usually no attempt is made to use nutrients in the sewage sludge. As mentioned previously, sewage sludge is placed on a surface disposal site for final disposal.

Approximately one-third of the sewage sludge used or disposed by POTWs (NSSS Questionnaire Survey) is landfilled with municipal solid waste. In co-disposal, the absorption characteristics of the solid waste and soil conditioning characteristics of the sewage sludge complement each other. The solid waste absorbs excess moisture from the sewage sludge and reduces leachate migration. Sewage sludge usually makes up 5 percent or less of the material in a municipal solid waste landfill.

Incineration is a disposal practice in which organic and inorganic material in sewage sludge are combusted in an enclosed device. Estimates from the NSSS Questionnaire Survey show approximately 52 percent (110) of the existing secondary and advanced treatment sewage sludge incinerators were built prior to 1973. Multiple hearth incinerators are the most common type of sewage sludge incinerator with 156 multiple-hearth incinerators (74 percent of the incinerators firing sewage sludge), 49 fluidized-bed incinerators (23 percent of the total), 3 flash-drying incinerators, and 2 electric furnaces. The estimated amount of sewage sludge fired in secondary and advanced treatment sewage sludge incinerators in 1988 was 736,000 dry metric tons, which is approximately 16 percent of all sewage sludge used or disposed by secondary or advanced treatment works. An additional 128,000 dry metric tons is estimated to be incinerated by primary treatment works. Not represented in this estimate are incinerators that fire sewage sludge with solid waste in municipal waste combustors. The Agency estimates that seven facilities practice co-incineration of sewage sludge with municipal solid waste.

Approximately 12,750 POTWs use or dispose 5.4 million dry metric tons of sewage sludge annually (NSSS Questionnaire Survey) or 47 pounds of sewage sludge (dry weight basis) for every individual in the United States.

Privately owned and federally owned treatment works also use or dispose of sewage sludge. The amount of sewage sludge used or disposed by these treatment works is unknown, but it is estimated to be no more than 0.1 million dry metric tons per year.

The volume of domestic septage used or disposed annually is significant. EPA estimates that up to 8.6 billion gallons of domestic septage are used or disposed annually, of which approximately half is discharged to POTWs and half is either land applied, placed on a surface disposal site, or placed in a lagoon for treatment.

Tables XIII–1 and XIII–2 present the amount of sewage sludge used or disposed annually by use or disposal practice for secondary and advanced treatment POTWs and for primary treatment POTWs, respectively, based on the flow rate of the POTWs as presented in the 1988 NSSS. Table XIII–3 presents the number of POTWs employing each use or disposal practice, as estimated in the 1988 National Sewage Sludge Survey for secondary and advanced treatment POTWs. The number of primary treatment POTWs employing each use or disposal practice, based on information from the 1988 Needs Survey, is presented in Table XIII–4.

TABLE XIII–1.—AMOUNT OF SEWAGE SLUDGE USED OR DISPOSED BY SECONDARY AND ADVANCED TREATMENT POTWS BY USE OR DISPOSAL PRACTICE AND FLOW RATE

[Thousands of Dry Metric Tons]

Use or disposal practice	Flow rate group				Total amount used or disposed	Use or disposal practice as percent of total
	>100 MGD	>10–100 MGD	>1–10 MGD	≤1 MGD		
Incineration	320.0	306.5	106.1	1.7	736.3	16.1
Land Application	255.0	586.7	499.9	178.1	1,519.7	33.3
Agriculture	117.8	349.3	398.6	131.3	997.0	21.8
Compost	11.5	58.7	28.5	29.9	128.0	2.8
Forests	2.3	23.1	0.3	1.0	26.7	0.6
Public Contact	47.0	53.2	36.7	4.6	141.4	3.1
Reclaimed	47.8	5.9	1.0	0.3	55.1	1.2
Sale	25.4	24.7	10.4	0.1	60.5	1.3
Undefined	3.3	70.8	24.4	11.7	110.1	2.4
Surface Disposal	39.2	240.4	110.2	81.6	471.4	10.3
Landspreading	15.3	113.5	57.6	33.9	220.4	4.8
Monofill	2.4	72.9	36.2	20.6	134.0	2.9
Other	21.5	54.0	14.5	27.1	117.0	2.6
Not Regulated	386.2	614.2	456.3	91.9	1,548.6	33.9
Unknown	141.7	143.2	0.7	0.0	285.7	6.3
Ocean Disposal*	141.7	143.2	0.7	0.0	285.7	6.3
Other	0.0	0.0	0.0	0.0	0.0	0.0
Transfer	N/A	N/A	N/A	N/A	N/A	N/A
Total	1,142.0	1,893.1	1,173.3	353.4	4,561.8	100
Percent of Total	25.0	41.5	25.7	7.7	100	

Note: Numbers may not add up to 100 percent because of rounding.
N/A indicates the value was not available.
*The NSSS data reflects use or disposal practices at the time the data was collected. The Ocean Dumping Ban Act of 1988 generally banned ocean dumping of sewage sludge by December, 1991. The last dumping ceased in June 1992.
Source: 1988 National Sewage Sludge Survey (Questionnaire), EPA.

TABLE XIII–2.—AMOUNT OF SEWAGE SLUDGE USED OR DISPOSED BY PRIMARY TREATMENT POTWS BY USE OR DISPOSAL PRACTICE AND FLOW RATE

[Thousands of Dry Metric Tons]

Use or disposal practice	Flow rate group				Total amount	Percent of total
	>100 MGD	>10–100 MGD	>1–10 MGD	≤1 MGD		
Incineration	82.9	58.0	18.7	8.8	128.4	16.1
Land Application	129.9	78.3	38.6	18.1	265.0	33.3
Surface Disposal	40.3	24.3	12.0	5.6	82.2	10.3
Not Regulated	132.4	70.9	59.3	18.5	270.0	34.0
Unknown	24.4	14.7	7.3	3.4	49.8	6.3
Total	390.0	235.2	115.8	54.4	795.4	100
Percent of Total	49.0	29.6	14.6	6.8	100	

Note: Numbers may not add up to 100 percent because of rounding.
Source: Estimated from 1988 Needs Survey and 1988 National Sewage Sludge Survey (Questionnaire), EPA.

TABLE XIII–3.—NUMBER OF POTWS USING A USE OR DISPOSAL PRACTICE AND THE AMOUNT OF SEWAGE SLUDGE USED OR DISPOSED BY SECONDARY AND ADVANCED TREATMENT POTWS

Use or disposal practice	POTWs using a practice		Sewage sludge used disposed	
	Number	Percentage of POTWs	Amount (thousands of dry metric tons)	Percentage of total amount
Incineration	327	3.0	736.3	16.1
Land Application	3,968	36.6	1,519.7	33.3
Agriculture	3,246	29.8	997.0	21.8
Compost	148	1.3	128.0	2.8
Forests	30	0.3	26.7	0.6
Public Contact	254	2.3	141.4	3.1
Reclaimed	69	0.6	55.1	1.2
Sale	199	1.8	60.5	1.3
Undefined	487	4.5	110.1	2.4
Surface Disposal	1,157	10.6	471.4	10.3
Landspreading	383	3.5	220.4	4.8
Monofill	320	2.9	134.0	2.9
Other	455	4.2	117.0	2.6
Not Regulated	2,595	23.8	1,548.6	33.9
Unknown	3,535	32.5	285.7	6.3
Ocean Disposal*	115	1.1	285.7	6.3

TABLE XIII–3.—NUMBER OF POTWS USING A USE OR DISPOSAL PRACTICE AND THE AMOUNT OF SEWAGE SLUDGE USED OR DISPOSED BY SECONDARY AND ADVANCED TREATMENT POTWS—Continued

Use or disposal practice	POTWs using a practice		Sewage sludge used disposed	
	Number	Percentage of POTWs	Amount (thousands of dry metric tons)	Percentage of total amount
Other	3,391	31.2	0	0.0
Transfer	22	0.2	N/A	N/A
Total	12,046	100	4,561.8	100

Notes: The total 12,046 indicates the total number of subpractices at the 10,893 POTWs. For Land Application and Surface Disposal practices, the numbers of subpractices do not total the number of POTWs practicing a use or disposal practice because some POTWs use more than one subpractice. Percentage of POTWs is the percentage of the 10,893 Secondary and Advanced Treatment POTWs. Numbers may not add up to 100 percent because of rounding. N/A indicates the value is not available.

*The NSSS data reflects use or disposal practices at the time the data was collected. The Ocean Dumping Ban Act of 1988 generally banned ocean dumping of sewage sludge by December, 1991. The last dumping ceased in June 1992.

Source: 1988 National Sewage Sludge Survey (Questionnaire), EPA.

TABLE XIII–4.—NUMBER OF POTWS USING A USE OR DISPOSAL PRACTICE AND THE AMOUNT OF SEWAGE SLUDGE USED OR DISPOSED BY THE POTWS PRIMARY TREATMENT POTWS

Use or disposal practice	POTWs using a practice		Sewage sludge used or disposed	
	Number	Percent of POTWs	Amount (thousands of dry metric tons)	Percent of total amount
Incineration	53	2.9	128.4	16.1
Land application	650	35.1	265.0	33.3
Surface Disposal	193	10.4	82.2	10.3
Not Regulated	394	21.3	270.0	34.0
Unknown	545	29.4	49.8	6.3
Total	1,855	100	795.4	100

Note: Numbers may not add up to 100 percent because of rounding.

Source: Estimated from 1988 Needs Survey and 1988 National Sewage Sludge Survey (Questionnaire), EPA.

Benefits and Costs of Today's Rulemaking

As mentioned previously, today's rulemaking contains an amendment to 40 CFR part 257, an amendment to 40 CFR part 403, and the final part 503 regulation (40 CFR part 503). Benefits and costs of each of these actions are presented in this part of the preamble.

Executive Order 12291 requires EPA to prepare a Regulatory Impact Analysis (RIA) for major regulations, which are defined by certain levels of costs and impacts. For example, the Executive Order specifies that a regulation imposing an annual cost and benefits to the economy of $100 million or more is considered "major" under the terms of the Order. According to the Executive Order, the RIA should contain descriptions of both potential costs and benefits.

Amendment to 40 CFR Part 257

The amendment to part 257 in today's rulemaking removes sewage sludge subject to the standards in the part 503 from the part 257 requirements, The final part 503 regulation now contains the requirements to be met if sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

The part 257 amendment in today's rulemaking has no costs because this action only amends the applicability of the part 257 regulation; therefore, the requirements in Executive Order 12291 do not apply to the amendment.

Amendment to 40 CFR Part 403

The amendment to part 403 in today's rulemaking adds two lists of pollutants to part 403 that are eligible for a removal credit with respect to the use or disposal of sewage sludge. A POTW may grant a removal credit for the pollutants on the two lists if all other applicable requirements are met.

The part 403 amendment in today's rulemaking has no costs. This amendment is expected to result in cost savings to industrial dischargers who receive a removal credit for a pollutant; therefore, the requirements in Executive Order 12291 do not apply to the amendment.

40 CFR Part 503

Based on EPA's estimate of the incremental costs of complying with the final part 503 regulation, the Agency does not consider the final part 503 regulation to be a major rule as defined in Executive Order 12291. However, EPA has prepared an extensive analysis of the benefits, costs, and other impacts associated with the final part 503 regulation. This analysis, "Regulatory Impact Analysis of the part 503 Regulation for Sewage Sludge Use or Disposal," is part of the administrative record for the final part 503 regulation. Copies of the RIA may be obtained from the National Technical Information Service (see section XIV of this preamble).

The part 503 RIA was forwarded to the Office of Management and Budget (OMB) with today's rulemaking. OMB's comments are presented in the part 503 administrative record.

As mentioned previously, the part 503 RIA contains an analysis of the benefits, costs, and economic impact associated with the final part 503 regulation. The analysis begins with an assessment of the sewage sludge use or disposal practices currently used by publicly owned, privately owned, and federally owned treatment works and by domestic septage haulers. The RIA then evaluates the impact of new or additional requirements imposed by the final part 503 regulation.

The Agency's overall approach to the RIA recognizes that, in addition to compliance costs for management practices and monitoring, record-keeping, and reporting, a POTW or other affected entity may be required to alter a current practice for sewage sludge use or disposal to achieve compliance with the final part 503 regulation. These changes could include shifts to a new or different combination of use or disposal practices or increased reliance on industrial pretreatment. The costs of these changes are evaluated for each part 503 use or disposal practice for which changes must occur. The benefits associated with complying with the regulation in the form of reduced health risks are also evaluated. The RIA presents quantitative estimates of these benefits, expressed as a reduction in the number of cancer cases and other health effects.

For the use or disposal practices subject to the final part 503 regulation, the Agency projects incremental annual compliance costs of $45.9 million annually (in 1992 dollars), or an average

of less than $1 per household served. Total annual costs include management practice costs; monitoring, record keeping, and reporting costs, and in a few cases, costs for a change in use or disposal practices.

Benefits of the final part 503 regulation are reduced effects on public health resulting from reduced exposure to pollutants in sewage sludge. EPA estimates that the benefits of the final part 503 are an annual reduction of less than 1 cancer case and 90 to 600 cases of identified adverse health effects. The final regulation also is expected to create certain environmental benefits as a consequence of improvements in managing the use or disposal of sewage sludge. Table XIII–5 presents a summary of the costs and benefits of regulating land application (subpart B), surface disposal (subpart C), and incineration (subpart E). Subpart D (pathogen and vector attraction reduction) costs are incorporated in the costs for subparts B and C, as appropriate. Benefits of subpart D are not calculated because no methodology has yet been developed to quantify the risks from pathogens in sewage sludge.

TABLE XIII–5.—ESTIMATED ANNUAL COSTS AND BENEFITS FOR ALL AFFECTED TREATMENT WORKS AND FIRMS TO COMPLY WITH THE PART 503 REGULATION

[$000]

	Costs	Benefits	
		Cancer	Non-cancer
Subpart B[a]	$14,182	0–0.5	0–500
Subpart C[a]	18,335	0–0.07	<1
Subpart E	11,703	0.09	90
Other Costs[b]	1,675		
Total Costs/Benefits	$45,895	0.09–0.7	90–590

[a] Costs for Subpart D are incorporated into the costs of meeting Subparts B and C.
[b] Costs of reading and interpreting the regulation and obtaining copies of Part 258 permits.
Source: Prepared by ERG and Abt for EPA.

The feasibility of pretreatment by industrial dischargers as a compliance alternative was evaluated as part of the final part 503 RIA. Land applying POTWs that failed the ceiling limits were analyzed to determine whether their host industries were likely to be causing high levels of the pollutant or pollutants that failed ceiling limits. In all cases, firms could be identified, based on the NSSS, that are considered likely contributors of these problem pollutants. Costs for more aggressive pretreatment programs at these firms were developed and used in the identification of the most likely compliance strategy. Where EPA determined that pretreatment was the most likely compliance strategy, the cost of pretreatment was used as the cost of compliance in the RIA. Furthermore, some POTWs practicing land application of sewage sludge currently cannot meet the part 503 pollutant concentration limits for land application of sewage sludge. Additionally, a few POTWs that fire sewage sludge in sewage sludge incinerators must install state-of-the-art pollution control equipment for metals to meet the part 503 requirements. These POTWs have a strong motivation to institute pretreatment to make the use or disposal of sewage sludge easier and less expensive.

In the RIA for the proposed part 503 regulation, the Agency conducted a limited number of case studies on the effect of industrial pretreatment on sewage sludge quality. Results of this study are presented as an appendix in the RIA for the final part 503 regulation. In this study, pollutant removals were estimated for all industrial dischargers subject to covered categorical pretreatment standards. EPA found, in these cases, that an increase in industrial pretreatment provides a significant reduction in the concentration of pollutants in sewage sludge in cases where the pollutant concentrations are high (it becomes increasingly difficult to reduce pollutant concentrations as the pollutant concentrations decline). The percentage reduction in pollutant concentrations in the case studies ranged from 6 to 96 percent. Most likely, many POTWs currently predicted to be unable to meet pollutant concentration limits in the land application subpart (and thus required to maintain records of the cumulative loadings of pollutants for each site to which sewage sludge is applied) could reduce the pollutant concentrations in the sewage sludge through a more stringent pretreatment program. This program would focus on the one or two pollutants for which the part 503 pollutant concentration cannot be met (most POTWs fail land application pollutant concentrations only for one or two pollutants).

Any reduction in pollutant concentrations because of pretreatment, however slight, achieved by POTWs firing sewage sludge in a sewage sludge incinerator that fails limits for metals could reduce the costs of compliance and make achieving compliance with subpart E of the final part 503 regulation easier overall. Without reductions in certain pollutants, several POTWs may need to monitor operations of the sewage sludge incinerator very closely to ensure that subpart E requirements are met.

The RIA for the final part 503 regulation contains some data limitations. The NSSS solved many of the data problems associated with the RIA for the proposed part 503 regulation. In addition, data gathering activities for privately and Federally owned treatment works and for domestic septage haulers that apply domestic septage to agricultural land, forest, or a reclamation site reduced some other limitations of the RIA for the proposed regulation. Some data limitations still exist, however.

Data for privately and Federally owned treatment works are still very limited. Numbers of privately owned treatment works were estimated from permits. Since only a few states collect data on use or disposal practices for privately owned treatment works, the Agency had to extrapolate the distribution of use or disposal practices using data from relatively few states to apply to the total population of privately owned treatment works.

Information on Federally owned treatment works, outside of numbers of treatment works, is unavailable. For this reason, the distribution of use or disposal practices estimated for privately owned treatment works was applied to Federally owned treatment works. In terms of flow rates, these two types of treatment works are similar. For this reason, EPA assumed that similar

sewage sludge use or disposal options are available to both types of treatment works.

Information on domestic septage haulers also is very limited. The Agency now has estimates of numbers of domestic septage haulers and typical use or disposal practices, but it has had to make estimates of the distribution of use or disposal practices based on limited information from a relatively few states where data on domestic septage haulers are collected.

Another limitation of the RIA is that, in some cases, EPA had to make assumptions about how POTWs would comply with the regulation. For example, the Agency assumed that nearly all POTWs that fire sewage sludge in a sewage sludge incinerator would elect to continue the practice of incineration. Some POTWs may decide, however, that it is less expensive to cease incineration and shift, for example, to land application. (Several POTWs that fire sewage sludge in sewage sludge incinerators generate sewage sludge that could meet the pollutant concentration limits for land application, and many could meet the cumulative limits using reasonable agronomic application rates.) For simplicity, the Agency calculated the costs of installing and operating pollution control equipment for metals needed for these POTWs to comply with the regulation, which in some cases might overstate the expense of the regulation if POTWs do decide to shift to another use or disposal practice. In all cases where simplifying assumptions such as this were made, the assumptions tended to overestimate costs of the regulation slightly, rather than underestimate costs.

A number of limitations affect the estimates of risk reduction (i.e., benefits) in the part 503 regulation. These limitations include the exclusion of certain exposure pathways, pollutants, and health effects from the estimates and the lack of ability to account for population growth and mobility.

Overall, however, EPA is confident that the compliance costs presented in the part 503 RIA reflect decisions POTWs and other entities are likely to make, as well as costs associated with these decisions. EPA also is confident that the benefits presented in the RIA are reasonable estimates of reductions in risk associated with the final part 503 regulation. In presenting the part 503 RIA, EPA divided the regulated entities into the five major groups: primary treatment POTWs, secondary and advanced treatment POTWs, privately owned treatment works, Federally owned treatment works, and domestic septage haulers. Most of the analysis focuses on secondary and advanced treatment POTWs, for which the Agency has the most information (i.e., information from the NSSS).

As noted in part III of today's preamble, data on sewage sludge quality were collected from about 200 secondary or advanced treatment POTWs during the NSSS. These data were compared to the applicable pollutant limits in the final part 503 regulation to determine whether the sewage sludge used or disposed at each POTW could meet those limits. Results of this comparison were extrapolated to the national level using the NSSS statistical weighing factors.

Any survey POTW that failed the part 503 pollutant limits given existing conditions, such as sewage sludge feed rates or land application rates, were then evaluated further to develop a compliance strategy for the POTW. Costs of the compliance strategy were then developed. A failure could be either regulatory or economic. For example, in the case of land application, if either application rates or site lives had to be reduced, a cost to deal with reductions in site lives or application rates had to be incurred. Costs to make changes to current use or disposal practices to meet part 503 requirements were then added to costs estimated for management practices, monitoring, record keeping, and reporting and then extrapolated to the national level.

To determine costs of compliance for primary treatment POTWs, the Agency determined that compliance costs for primary treatment POTWs are similar to costs for secondary or advanced treatment POTWs. This is based on the Agency's determination that pollutant concentrations in sewage sludge from primary treatment POTWs are likely to be no worse than those in sewage sludge from secondary or advanced treatment POTWs for the part 503 pollutants of concern. (SAIC 1991 Memorandum from Kathleen Stralka and Scott Henderson, to Chuck White, EPA, re: Nonparametric tests of hypothesis concerning pollutant concentrations in primary and secondary sewage sludge for 40-City Study Data, August 28). Compliance costs developed for each use or disposal practice and for each reported flow rate group investigated in the RIA (greater than 100 million MGD, greater than 10 MGD but equal to or less than 100 MGD, greater than 1 MGD but equal to or less than 10 MGD, and equal to or less than 1 MGD) were applied to the appropriate primary treatment POTWs. For example, per-POTW costs were estimated for secondary and advanced treatment POTWs with a flow rate greater than 10 MGD but equal to or less than 100 MGD that practice land application. These per-POTW costs included management practice, monitoring, record keeping, and reporting costs, as well as any compliance costs associated with sewage sludge quality. The per-POTW cost was then applied to all primary treatment POTWs with a flow rate greater than 10 MGD but equal to or less than 100 MGD and that practice land application (data on flow rate and use or disposal practice for primary treatment POTWs were estimated based on EPA's 1988 Needs Survey because the NSSS did not survey that type of treatment works).

To estimate costs of compliance for privately and Federally owned treatment works, the Agency assumed that the sewage sludge quality of these treatment works is similar to that of the smallest POTWs surveyed in the NSSS because both privately and Federally owned treatment works typically have a flow rate less than 1 MGD. The per-POTW costs developed for the smallest POTWs in the NSSS were applied, based on use or disposal practice, to the estimated number of privately and Federally owned treatment works that employ each use or disposal practice in the same way discussed previously for primary POTWs.

Compliance costs for domestic septage haulers were calculated differently because the final part 503 regulation imposes different requirements for the use or disposal of domestic septage. Part 503 does not require domestic septage applied to agricultural land, forest, or a reclamation site to meet pollutant concentration limits. Part 503, however, does require either ground-water monitoring or a certification that ground-water is not contaminated with nitrogen as a result of domestic septage placed on a surface disposal site. Because of the cost of this requirement, EPA estimates that the smallest domestic septage haulers will most likely find shifting to land application less expensive than continuing to surface dispose (EPA estimates that larger domestic septage haulers, however, will continue to practice surface disposal). Compliance costs for domestic septage haulers are estimated per-firm or per-tankload, as outlined in the discussions below, covering the impacts from the part 503 regulation for the use or disposal practice employed by a domestic septage hauler.

As mentioned previously, the RIA discusses both the benefits and the costs of the part 503 regulation. The presentation on benefits in the part 503 RIA is limited to a description of the

methodology used to estimate benefits and a summary of the results of the benefit analysis. More details on the aggregate risk assessment may be obtained from the document entitled "Human Health Risk Assessment for the Use and Disposal of Sewage Sludge: Benefits of Regulation." Information on obtaining single copies of this document is provided in part XIV.

The risk assessment for the benefits analysis follows the process outlined by the National Academy of Sciences. The assessment begins with a hazard identification and a source assessment and continues with fate and transport estimates, exposure assessments, pharmacokinetics analysis, and dose-response assessments. These components are used to estimate changes in public health, measured as morbidity and mortality.

The first step in estimating the benefits of the final part 503 regulation involves estimating the baseline public health risks of sewage sludge use or disposal. These risks are presented as cases of cancer and other adverse health effects, such as lead-related adverse effects. The key inputs for estimating baseline risks include source (POTW) information, sewage sludge pollutants, and ultimate use or disposal site characteristics.

Baseline risks from sewage sludge use or disposal practices are characterized using (1) sewage sludge quality as determined from the analytical portion of the NSSS, (2) the amount of sewage sludge used or disposed of by each POTW, and (3) the fate and transport of the pollutants subsequent to use or disposal, depending on a number of different environments that vary with each use or disposal practice.

Using the above inputs, the analysis estimates the potential pathways of human exposure and models the fate and transport of the key sewage sludge pollutants for these pathways. The analysis then estimates the potential population exposed. This information, along with dose-response data for each of the sewage sludge pollutants of concern, is used to characterize baseline public health risks.

After baseline risks were estimated, risk estimates were developed assuming the final part 503 requirements are met. The regulatory compliance strategies for the public health risk analysis assessment paralleled the strategies used to estimate the compliance cost. The same risk assessment process is used to derive the change in the baseline risk as a result of the requirements for each part 503 use or disposal practice. This change in the baseline is the measure of benefit.

Estimates of the benefits for each use or disposal practice are expressed as the number of disease cases avoided. These disease cases include cancer cases avoided and noncancer human health effects avoided. Estimated costs and benefits for the part 503 requirements for each part 503 use or disposal practice are discussed later.

Land Application

Cost and benefit analyses for the part 503 land application requirements were conducted by type of treatment works or other entity. Results of the analyses for secondary and advanced treatment works, primary treatment works, privately owned treatment works, federally owned treatment works, and domestic septage haulers are presented as follows.

For secondary and advanced treatment works, compliance with the final part 503 regulation was determined by comparing the sewage sludge quality of the POTWs in the NSSS with either pollutant concentration limits or the cumulative pollutant loading rate limits. For the cumulative pollutant loading rate limits, EPA assumed the sewage sludge application rate for a POTW is the application rate from the NSSS. The Agency also assumed that an application site has a 20-year site life (determined to be a site life that would impose no economic impacts to a POTW). Results of this analysis were extrapolated from the survey POTWs to the entire population of secondary and advanced treatment POTWs. The analysis indicated that of the 4,328 secondary and advanced treatment POTWs estimated to practice land application, 49 POTWs, or 1 percent, fail the ceiling concentrations. An additional 3,216 POTWs, or 74 percent, pass the pollutant concentration limits. Of the remaining 1,063 POTWs, most are able to meet the cumulative pollutant loading rate limits. Nearly all of these POTWs, even though they have to meet more extensive recordkeeping requirements, are expected to comply with the land application requirements with no additional compliance costs associated with pollutant limits (i.e., the POTWs will incur no costs to shift to an alternative use or disposal practice or need to change current application rates because of the life of the application site).

Of the 49 POTWs that fail the pollutant ceiling limits, 30 are expected to institute more stringent pretreatment requirements and were estimated to continue to practice land application. The remaining 19 POTWs are expected to shift to codisposal.

The total quantity of sewage sludge that fails ceiling limits is 80,000 dmt. Of this, 63,000 dmt is expected to be shifted to codisposal. Costs to POTWs for pretreatment are $2.9 million. Total costs to POTWs for shifting to codisposal are $6.0 million. Thus, the costs associated with sewage sludge that fails to meet ceiling concentrations is estimated to be $8.9 million.

Of those POTWs whose sewage sludge meets the ceiling limits but that does not meet the pollutant concentration limits, 49 POTWs are estimated to dispose of sewage sludge that is expected to fail to meet the cumulative limits with existing application rates and a 20-year site life. However, all but two of the representative survey POTWs were out of compliance with existing state regulations at the time of the NSSS. Changes made to use or disposal practice because the POTW is out of compliance with either existing state or Federal requirements are not considered a cost of part 503. Furthermore, following discussions with one of the two surveyed POTWs that failed the cumulative pollutant loading rate limits, the Agency determined that impacts on this POTW (which represents six nationwide) would be very small because of the easy availability of large amounts of additional land for application of sewage sludge and the ability of the POTW to shift among various other use or disposal practices at virtually no incremental cost.

One other POTW whose sewage sludge is estimated to fail the part 503 land application pollutant limits (represented by one POTW in the survey) is expected to dispose of a portion of the sewage sludge that is currently land applied in a municipal solid waste landfill, a practice employed by another POTW operated by the same authority. The estimated incremental cost of shifting 1,800 dry metric tons from land application to codisposal is approximately $9,000 annually.

Total compliance costs for meeting all land application pollutant limits are estimated to be $8.9 million. The quantity of sewage sludge shifted from land application to codisposal is estimated at approximately 4 percent of the total quantity land applied.

Management practices in the land application subpart are expected to impose a negligible cost on secondary and advanced treatment POTWs. General requirements are estimated to cost $0.2 million annually. Monitoring costs based on the frequency of monitoring requirements in the part 503 regulation are expected to be $1.6 million annually. Record keeping costs are estimated to be $0.9 million

annually. Finally, reporting costs are estimated at about $20,000 annually. Thus, the total estimated compliance costs associated with land application for secondary and advanced treatment POTWs are estimated to be $11.6 million annually.

As discussed previously, per-POTW costs by flow rate for secondary and advanced treatment POTWs that land apply sewage sludge were applied to the 948 primary treatment POTWs estimated to land apply sewage sludge. These per-POTW costs ranged from $426 to $43,507 annually. Total costs for primary treatment works that practice land application are expected to be $1.9 million annually.

Per-POTW costs developed for the smallest POTWs in the NSSS that land applied sewage sludge were applied to privately owned treatment works. An estimated cost of $426 per treatment works was applied to the 1,029 privately owned treatment works to estimate the cost of the part 503 land application requirements. Total costs of the part 503 land application requirements for this group of treatment works is estimated to be $0.4 million annually.

The $426 per treatment works cost for small treatment works also was applied to 53 Federally owned treatment works to estimate the cost of the land application requirements. Estimated costs for Federally owned treatment works using the $426 per treatment works cost is $ 0.02 million annually.

Monitoring costs discussed above for the different groups of treatments works include some costs for monitoring needed to show compliance with the operational standards for pathogen and vector attraction reduction in part 503. No other costs are included for the part 503 pathogen and vector attraction reduction requirements because of the current requirements in 40 CFR part 257 for pathogen and vector attraction reduction. The requirements in part 503 are either identical to current part 257 requirements (i.e., class requirements that can include meeting PSRP) or are similar to those current requirements in part 257 but expressed differently (i.e., part 503 indicates pathogen density requirements that must be met, but properly operated PFRP processes, which can be used to meet Class A requirements, should be able to meet the limits specified). Since the part 257 requirements currently apply, no additional costs, aside from some monitoring cost, for the part 503 pathogen and vector attraction reduction requirements are expected.

Domestic septage haulers practicing land application are required either (1) to inject or incorporate the septage into the soil and meet harvesting and site access restrictions or (2) to add alkali to raise the pH of domestic septage to 12 for 30 minutes. In addition, the annual application rate for an application site is limited based on the amount of nitrogen needed by the crop or vegetation grown on the land.

Domestic septage haulers that apply domestic septage to agricultural land, forest, or a reclamation site must meet certain record keeping requirements including noting the amount of septage applied to each site. The only cost of the land application requirements for domestic septage haulers is this record keeping cost, which is estimated at $0.2 million annually.

Based on the previous figures, the Agency estimates that the total cost of complying with land application requirements in the final part 503 regulation will be $14.2 million annually.

Baseline risks associated with land application of sewage sludge (i.e., the risks associated with current practices) are estimated to be less than 1 cancer case and about 500 cases of other health effects. The benefits of complying with the final part 503 regulation are expressed as reductions in the risk—the number of baseline cases that are avoided. For land application, the benefits are estimated to be less than 1 cancer case avoided and 0 to 500 cases of other adverse health effects avoided.

Surface Disposal

The final part 503 regulation for surface disposal of sewage sludge requires that sewage sludge meet certain pollutant concentrations before being placed on an active, unlined sewage sludge unit. The pollutant concentration limits vary, depending on the distance from the site to the property boundaries. Management practices, monitoring frequency, record keeping, and reporting requirements also are included in part 503 for surface disposal of sewage sludge, regardless of whether the site is lined or unlined. Costs and benefits of the part 503 surface disposal requirements on the different groups of treatment works and other entities are discussed as follows.

Data on quality of sewage sludge placed on a surface disposal site were obtained from the NSSS and compared to the appropriate pollutant limits presented in the surface disposal subpart. The Agency made several assumptions necessary to select appropriate pollutant limits to compare sewage sludge quality.

First, EPA assumed all active sewage sludge units are located more than 150 feet from the property boundary of the surface disposal site (a reasonable worse-case assumption). Second, the Agency assumed that all active sewage sludge units are unlined (based on the finding that no monofills in the NSSS were reported to be lined). The part 503 pollutant limits for units located 150 ft. or more from the property boundary were thus determined to be the appropriate limits for comparison with pollutant concentrations from the NSSS.

Because of the expense of installing ground-water monitoring wells, the Agency determined that most POTWs reporting in the NSSS incorporated sewage sludge into the land for disposal (called dedicated land application in the NSSS) would shift to land application rather than continue to use the land strictly for disposal. The Agency identified POTWs that would shift by assuming that any POTW with an application rate that allowed it to meet the cumulative pollutant loading rates in the land application subpart, while applying the sewage sludge at an agronomic rate, would shift to land application. The Agency estimates that this assumption results in no costs to the POTWs that could meet the land application requirements (the POTW only has to be permitted for land application rather than for surface disposal). Out of 1,936 surface disposers, 526 were estimated to be permitted as land appliers. The remaining 1,410 POTWs were estimated to be permitted as surface disposers. Included in this count are 301 POTWs that store sewage sludge for more than two years. Two additional survey POTWs, representing 60 nationwide, are expected to discontinue long-term storage and codispose more of their sewage sludge. Costs for increasing the quantity of sewage sludge disposed annually are estimated to be $0.4 million.

Results of the pass/fail analysis for the 1,410 surface disposers indicate that all but eight POTWs have sewage sludge that meets the pollutants limits. The eight POTWs are expected to request site-specific pollutant limits. If site-specific pollutant limits are allowed, sewage sludge from all of the POTWs is expected to meet the site-specific pollutant limits based on the difference between the actual depth to ground water at the active sewage sludge unit and the depth to ground water assumed when the part 503 pollutant limits were developed. Thus, no surface disposers are expected to fail pollutant limits.

Costs for meeting general requirements will apply. These include a requirement to provide a closure plan when the surface disposal site closes. Based on an assumption that one-

twentieth of all surface disposal units close each year, total costs for this requirement are expected to be about $30,000 annually.

Management practice costs will also be incurred. Most of the management practice requirements are very similar to those in part 257 and are expected to result in negligible costs. However, unlined surface disposal units (which all are assumed to be) are unlikely to be certified that they will not contaminate ground water. Thus, EPA assumes ground-water monitoring must be performed. The total cost to plan the monitoring program, install monitoring wells, and sample and test ground water is expected to total $1.5 million per year.

Pathogen and vector attraction reduction requirements will have an impact on surface disposers. A number of POTWs are estimated to require further sewage sludge processing or to use daily cover in order to meet these requirements. Annual costs for all these changes are estimated at $9.6 million.

The part 503 regulation also has frequency of monitoring, record keeping, and reporting requirements when sewage sludge is placed on an active sewage sludge unit. Costs for these activities are estimated at $0.6 million annually. Total costs for secondary and advanced treatment POTWs to comply with surface disposal requirements in the final part 503 regulation are estimated at $12.1 million annually.

The per-POTW costs for placement of sewage sludge on a surface disposal site developed using the NSSS were applied to the 273 primary treatment POTWs estimated to practice surface disposal. These costs ranged from $3,925 to $96,922 per POTW. Total costs for primary treatment POTWs to meet the surface disposal requirements in the final part 503 regulations are estimated to be $1.8 million annually.

A per-POTW cost of $3,925 for the smallest POTWs in the NSSS that place sewage sludge on an active sewage sludge unit was used to estimate the costs of compliance for the 551 privately owned treatment works which place sewage sludge on a surface disposal site. The estimated cost of complying with surface disposal requirements for privately owned treatment works is $2.2 million annually.

The per-POTW cost of $3,925 for the smallest POTWs in the NSSS that place sewage sludge on an active sewage sludge unit also was used to estimate compliance costs for Federally owned treatment works which place sewage sludge on an active sewage sludge unit. Multiplying that unit cost times 28 Federally owned treatment works results in an estimated cost $110,000 annually for Federally owned treatment works to meet the part 503 surface disposal requirements.

Domestic septage placed on an active sewage sludge unit must meet only the general requirements management practices, vector attraction reduction requirements, monitoring requirements (only if alkali addition is to meet vector attraction reduction requirements), and record keeping requirements. The largest cost is for management practices, which includes ground-water monitoring. Because of this expense, 884 small domestic septage haulers are expected to shift to land application. Costs for ground-water monitoring are $1.3 million, costs for the shift to land application are $0.9 million, and costs for record keeping and reporting are $0.06 million. The total cost for the 1,360 domestic septage haulers that currently place domestic septage on an active sewage sludge unit is estimated at $2.2 million per year, costing approximately $981 to $2,798 per firm, depending on the size of the firm (in gallons per year of domestic septage pumped). The total cost of the part 503 surface disposal requirements to all types of treatment works and to other entities is estimated to be $18.3 million per year.

The baseline risks associated with surface disposal (i.e., the risks associated with current practice) are estimated to be less than one cancer or other health effects case. The benefits of complying with the surface disposal requirement, expressed as the number of baseline cases that are avoided, are estimated to be 0 to 0.07 cancer cases avoided and less than one other health effects avoided.

Sewage Sludge Incineration

The part 503 requirements for firing sewage sludge in a sewage sludge incinerator require that the allowable concentration of selected inorganic pollutants in the sewage sludge be calculated using equations in the regulation. Terms in the equation must be determined on a case-by-case basis, except for the risk specific concentration for the pollutants. The Agency developed these concentrations using a pathway risk assessment. The only pathway evaluated was the inhalation pathway. For this reason, the pollutant limits in the incineration subpart protect public health from the reasonably anticipated adverse effect of the pollutants if the pollutants are inhaled.

Also included in this subpart is an operational standard for total hydrocarbons (THC). The value for THC in the final part 503 regulation can not be exceeded in the exit gas from the sewage sludge incinerator stack. Management practices and frequency of monitoring, record keeping and reporting requirements are also included in this subpart.

The impacts of the part 503 incineration requirements on secondary and advanced treatment POTWs and primary treatment POTWs are investigated in this part of the preamble because only those groups of treatment works are believed to operate sewage sludge incinerators. However, other treatment works (both privately owned and publicly owned) transfer sewage sludge to POTWs that operate sewage sludge incinerators. Since costs of the incinerator subpart are based on costs to POTWs operating sewage sludge incinerators, cost-passthrough associated with sewage sludge transferred to treatment works operating sewage sludge incinerators is discussed in the regulatory flexibility analysis to avoid double counting of total cost.

A pass/fail analysis was conducted on the NSSS POTWs using the site-specific information necessary to calculate whether, with existing sewage sludge quality, the risk-specific concentrations in the incineration subpart could be met without any changes in feed rate, dispersion factor, or incinerator control efficiencies. Results of this analysis were extrapolated to the entire population of POTWs that operate sewage sludge incinerators nationally (these numbers are based on the analytical survey weights).

Of 185 POTWs that operate 284 sewage sludge incinerators, 171 can meet the part 503 requirements for inorganic pollutants, and all can meet the THC operational standard. Of those failing the limits on inorganic pollutants (14 POTWs), all were assumed to retrofit wet electrostatic precipitators (WESPs). When added to the existing pollution control equipment, WESPs result in pollutant control efficiencies needed without changing the existing sewage sludge quality or dispersion factor (i.e., raising stack height) and without reducing sewage sludge feed rates. The cost of retrofitting and operating WESPs is estimated to be $3.6 million annually. No cost of complying with the THC operational standard will be incurred.

Costs to test a sewage sludge incinerator for pollutant control efficiencies, costs to develop a dispersion factor, and management practice costs, which include costs to install and operate different equipment, are estimated at $7.3 million annually. Frequency of monitoring, record

keeping and reporting costs are estimated to total $0.3 million annually. Total estimated costs to comply with the part 503 requirements for firing sewage sludge in a sewage sludge incinerator for secondary and advanced treatment POTWs are $11.2 annually.

Estimated costs to comply with the part 503 incineration requirements for the NSSS POTWs range from $37,000 to $315,000 per POTW. If these costs are applied to the 11 primary treatment POTWs estimated to operate sewage sludge incinerators, the estimated cost of complying with the part 503 incineration requirements is $0.5 million annually for primary treatment POTWs. Total costs for secondary and advanced treatment works and for primary treatment works to comply with the part 503 incinerator requirements is $11.7 million annually.

Baseline risks associated with incineration (i.e., current practice risks) of sewage sludge are estimated to be 0.3 to 4 cancer cases and 100 other health effects. The benefits of complying with the part 503 incineration requirements are expressed as reductions in number of baseline cases avoided. For sewage sludge incineration, the benefits are estimated to be 0.09 cancer cases avoided and 90 other adverse health effects avoided.

A few additional costs of part 503 are not associated with the part 503 use or disposal practice employed. These costs are associated with (1) reading and interpreting the final part 503 regulation, which are assumed to be incurred whether a part 503 use or disposal practice is used for the use or disposal of sewage sludge, and (2) obtaining copies of part 258 permits, which are assumed to be needed to show that the municipal solid waste landfill meets the part 258 requirements. Costs of these activities are estimated to be $1.7 million per year.

The final part 503 regulation is expected to result in environmental benefits other than the benefits associated with reducing the incidence of adverse human health effects. These environmental benefits are an outgrowth of the general reduction in the amount and toxicity of sewage sludge used or disposed in ways that damage the environment, particularly sewage sludge that is placed in environmentally sensitive areas. These environmental benefits consist mainly of improved habitats for wildlife and other species in the areas where incineration of sewage sludge occurs.

For example, emissions reductions in the vicinities of sewage sludge incinerators may reduce particulate and other types of deposits on buildings, automobiles, and structures, reducing the extent to which these items are damaged by air pollution. Commercial farms and home gardens located in areas affected by deposits from sewage sludge incinerators may experience some increase in crop vitality because of lower levels of discharged pollutants.

The regulation may account for some cost savings as well. Many POTWs whose sewage sludge meets the pollutant concentration limits are currently practicing disposal (e.g., incineration, codisposal). EPA believes that part 503 regulation may help to ease misapprehensions about the quality of sewage sludge and that a more receptive market for high-quality sewage sludge now being disposed might develop. If the regulation helps to encourage the shift from disposal to land application for just 10 percent of all high-quality sewage sludge now disposed, a savings of nearly $1 million in fertilizer costs might be realized by farmers.

Regulatory Flexibility Analysis

The Regulatory Flexibility Act requires all Federal agencies to analyze the impact of a regulation on small businesses, small governmental jurisdictions, and small organizations. The purpose of this analysis is to determine the extent to which the regulation has an impact on small entities and the nature of those impacts. For the purpose of the final part 503 regulation, the Agency defines a small entity as a POTW with a flow rate equal to or less than one MGD that corresponds to a service area of approximately 10,000 residents; a privately owned treatment works (nearly all of which have a flow rate of one MGD or less); and all domestic septage haulers, regardless of size (most domestic septage firms are operated by one self-employed person and possibly another part-time or full time employee).

Approximately 90 percent of all entities potentially subject to the final part 503 regulation are considered small by this definition. However, only a portion of small entities employ use or disposal practices covered by the part 503 regulation. Only about 40 percent of all small entities potentially subject to the part 503 regulation employ a use or disposal practice covered by part 503.

The total estimated compliance costs for the final part 503 regulation for small entities is $14.1 million, the majority of which is attributed to land application and surface disposal of sewage sludge. Of the total estimated costs for all small entities, 73 percent is attributed to entities (treatment works and septage haulers) that place sewage sludge on a surface disposal site.

Estimated compliance costs for the part 503 regulation for small publicly and privately owned treatment works are $11.0 million for direct and indirect costs including $0.4 million for cost of reading and interpreting the regulation. Thus, compliance costs for small treatment works are only about 23 percent of the total estimated compliance costs for all treatment works and firms. EPA has judged that small privately or publicly owned treatment works are not subject to substantial compliance costs under part 503 and thus focused attention on domestic septage haulers, some of which bear the largest portion of compliance costs as a ratio of revenue among small entities.

Domestic septage haulers will incur $2.4 million in compliance costs to meet the requirements in part 503. Domestic septage haulers that practice land application or surface disposal (6,120 businesses) handle about 3.1 billion gallons of domestic septage annually. Prices charged on average for domestic septage pumping are approximately $70 per 1,000-gallon septic tank. Total annual revenues for this group are thus estimated to be $217 million annually. The incremental costs of this regulation are thus only about 1 percent of the total annual revenues for this group of businesses. Total operating costs are calculated to be approximately $156.6 million for land appliers and $44.7 for surface disposers. The annual costs of complying with the part 503 regulation ($0.2 million for land appliers and $2.2 million for surface disposers) are therefore estimated to increase operating costs by about 1 percent. Only the smallest surface-disposing domestic septage haulers are considered to be potentially affected significantly by the part 503 regulation (compliance cost as a percentage of revenues are expected to be 14 percent for these firms. Most small entities are associated with ratios of one percent or less).

The Agency is not requiring domestic septage haulers to meet the more stringent and costly pathogen and vector requirements for POTWs and privately owned treatment works. Domestic septage haulers are exempted from testing domestic septage for inorganic and organic pollutants, a major cost item for POTWs and privately owned treatment works. Record keeping requirements also have been kept as simple as possible, and no reporting is required. Thus, EPA believes it has provided domestic septage haulers with the least burdensome regulation

compatible with its mandate to protect public health and the environment.

Prices charged by domestic septage pumpers vary widely by region. These prices range from $35 per septic tank to more than $200 per septic tank. If costs to comply with the part 503 requirements are passed directly through to the estimated 4.3 million homeowners who have a septic tank pumped in any one year, the pumping costs could rise by about $1.30 each. This is an increase of 0.7 percent to 4 percent (averaging 2 percent) over current prices for tank pumping. Even if prices increase to an average of $71.30, or about $36 per year per household (based on a tank pumping schedule of every two years), this is considerably less, on average, than typical per-household charges for sewage treatment at POTWs.

Domestic septage haulers that practice land application are estimated to incur $0.2 million annually to comply with part 503 requirements. All of these costs are associated with meeting the record keeping requirements. Small surface disposers, on the other hand, are expected to shift to land application and larger domestic septage haulers are expected to install ground-water monitoring wells and meet other requirements of subpart C. The major costs to these firms to shift practices are the costs to monitor ground water or to acquire additional land. The major cost to continue to surface dispose is the cost to install wells and monitor ground water. The cost to shift to land application and to monitor ground water account for nearly 97 percent of all costs to surface-disposing domestic septage haulers. Average incremental costs per firm are $48 for land appliers and $1,602 for surface disposers. Based on an analysis of net present value for the most affected small surface disposing septage haulers, EPA concludes that septage hauling firms are unlikely to close because of part 503 requirements.

Paperwork Reduction Act

The annual public reporting burden for the collection of information imposed by this final rule, averaged over a 3-year period, is estimated to be 133,198 hours for 11,056 respondents (5,088 publicly owned treatment works, 1,208 privately owned treatment works, and 4,768 domestic septage haulers) practicing land application; 65,295 hours for the 6,188 respondents (2,071 publicly owned treatment works, 547 privately owned treatment works, and 3,570 domestic septage haulers) disposing of sewage sludge on surface disposal sites; and 207,294 hours for the 186 respondents (publicly owned treatment works) which fire sewage sludge in a sewage sludge incinerator. The average time per response per respondent is estimated to be 36.4 hours. Respondent reporting and recordkeeping burden for this collection of information includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and revising the collection of information.

The information collection requirements in this rule have been approved by the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and have been assigned control number 2040–0157.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Chief, Information Policy Branch, EPA, 401 M Street, SW. (PM–223Y), Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

Part XIV: Availability of Technical Information on the Final Rule

Availability of the Final Rule and Preamble

The final rule and preamble may be obtained by contacting: Dr. Alan Rubin, Sludge Risk Assessment Branch (WH–586), United States Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, (202) 260–1306.

Availability of Technical Support Documents

The following technical support documents are available:

(1) Technical Support Document for Land Application of Sewage Sludge—Volume I—PB93–110575
(2) Technical Support Document for Land Application of Sewage Sludge—Volume II—PB93–110583
(3) Technical Support Document for Surface Disposal of Sewage Sludge—PB93–110591
(4) Technical Support Document for Incineration of Sewage Sludge—PB93–110617
(5) Technical Support Document for Pathogen and Vector Attraction Reduction in Sewage Sludge—PB93–110609
(6) Human Health Risk Assessment for Use and Disposal of Sewage Sludge: Benefits of Regulation—PB93–111540
(7) The Regulatory Impact Analysis—PB93–110625

These documents may be ordered from: National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161, ATTN: Sales, Telephone No. (703) 487–4650.

Please specify PB number when ordering.

Availability of Data and Information on the National Sewage Sludge Survey

Data and information from the National Sewage Sludge Survey are available as computer files and printed documents. These items can also be ordered from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, ATTN: Sales, telephone number (703) 487–4650. Please specify PB number when ordering.

Computer files of the database for the National Sewage Sludge Survey are available in three different formats. Persons requesting computer files, under any option, will want the National Sewage Sludge Survey: Data Element Dictionary for the Questionnaire and Analytical Databases (PB90–198961) and they may want the Data Element Dictionary for the Data Conventions Database (PB93–500403). These dictionaries contain definitions and specifications for all variables in each referenced database. The three computer file formats are as follows:

(1) ASCII Format Databases for the 1988 National Sewage Sludge Survey (PB93–500403) are available. These are IBM PC compatible files containing the Questionnaire Database, the Analytical Database, and the Data Conventions Database for the National Sewage Sludge Survey. These databases come on fourteen 3.5" 1.44 Mb floppy diskettes and approximately 20 Mb of hard drive space is required for installation.

(2) SAS format tapes (PB–90–501834) are also available. Databases available in this format include the Questionnaire Database and the Analytical Database. These are nine track tapes, written in SAS transportable code at 1600 bpi, with logical record lengths of 80 and block sizes of 8000. The tapes were written under the OS operating system, but they should also be readable by CMS, VSE, AOS/VS, PRIMOS, and VMS.

(3) Computer access to the EPA National Computer Center (NCC), which houses the reference copy of the database in the format of the SAS system for statistical analysis, is available on a fee for service basis. In order to open an account with NTIS on the NCC system, state that you wish to access the database for the National Sewage Sludge Survey. No special

passwords are required and the dataset identifiers are listed in the appropriate data element dictionaries.

Printed copies of the Analytical Database (PB90–107491), and Questionnaire Database (PB90–107509) are also available from NTIS.

Availability of Other Documents Used in Developing the Final Part 503 Rule

A copy of the documents (e.g., Response to Comments Document for the proposed part 503 Rule, Analytical Methods for the National Sewage Sludge Survey, Statistical Support Documentation for part 503, etc.) cited in the reference section of this Notice are available for review at EPA's Water Docket; 401 M Street, SW; Washington, DC 20460. The Docket is located in room L–102. For access to Docket materials, call (202) 260–3027 between 9 a.m. and 3:30 p.m. for an appointment. The EPA public information regulation (40 CFR part 2) provides that a reasonable fee may be charged for copying.

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Part XV: Description of the Amendments to 40 CFR Parts 257 and 403

Amendment to 40 CFR Part 257

The existing requirements in 40 CFR part 257 are applicable to all solid waste disposal facilities and practices regulated under sections 4004 and 4010 of the Resource Conservation and Recovery Act. With certain exceptions, the requirements in 40 CFR part 257 apply to all types of facilities (e.g., landfills, surface disposal sites, land application units, and waste piles) used for the disposal of solid waste and all types of non-hazardous solid wastes (i.e., municipal, industrial, commercial, agricultural, mining, and oil and gas wastes). Part 257 also applies to the disposal of sewage sludge.

Included with the 1989 part 503 proposal was a proposed amendment to part 257. The purpose of the amendment was to delete the requirements in part 257 that pertain to sewage sludge. This included deleting section 405(d) from the part 257 authority, deleting references to sewage sludge in 257.1, revising the definitions for "sludge" and "solid waste" in 257.2, deleting the reference to sections 405(d) and 405(e) from 257.3–4, and deleting paragraphs (b) and (c) from 257.3–6. These proposed changes are discussed below with respect to the final amendment to part 257 in today's rulemaking. No comments were received from the public on the proposed part 257 amendment during

the comment period for the 1989 proposal.

The final part 503 regulation contains requirements for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. There is one case, however, that the part 503 requirements do not apply to sewage sludge used or disposed through those practices. Part 503 does not apply to the use or disposal of sewage sludge generated at an industrial facility during the treatment of industrial wastewater combined with domestic sewage generated at the industrial facility. That sewage sludge has to meet the part 257 requirements if it is disposed on the land. Because the part 257 requirements continue to apply to certain sewage sludges, today's amendment does not delete section 405(d) from the part 257 authority.

Section 257.1(b)(1) was proposed to be changed in the 1989 proposal to indicate the part 257 criteria do not apply to the use or disposal of sewage sludge under section 405(d) of the Clean Water Act. Because certain sewage sludges are subject to the part 257 requirements, today's rulemaking amends 257.1(b)(1) to indicate that part 257 contains guidelines for the disposal of sewage sludge not used or disposed through a practice regulated in 40 CFR part 503. This means that part 257 applies if sewage sludge is disposed on the land and if the sewage sludge is not used or disposed in accordance with part 503.

The 1989 proposal also proposed to amend 257.1(c)(3) and 257.1(c)(4) by deleting the last sentence in each subsection. Today's part 257 amendment deletes the final sentence in 257.1(c)(3), but does not delete the final sentence in 257.1(c)(4).

The last sentence in the current 257.1(c)(3) indicates that the part 257 criteria apply to disposal of sludges generated by treatment of domestic sewage. Because the applicability of part 257 to disposal of sewage sludge is addressed in the amended 503.1(b)(1) and in a new 503.1(c)(11), the last sentence no longer applies. For this reason, it was deleted from 257.1(c)(3).

The last sentence in 257.1(c)(4) concerning disposal of septic tank pumpings is not being deleted in today's amendment because part 257 still applies to the disposal of pumpings from septic tanks that receive commercial or industrial wastewaters. Use or disposal of pumpings from septic tanks that receive only domestic sewage (i.e., domestic septage) is addressed in part 503.

The second revision to 257.1(c) in today's amendment adds a new provision at 257.1(c)(11). This provision indicates that the part 257 criteria do not apply to the use or disposal of sewage sludge, including domestic septage, on the land when the sewage sludge is used or disposed in accordance with 40 CFR part 503. Note that domestic septage does not include pumpings from septic tanks that receive commercial or industry wastewater. As mentioned above, if those pumpings are disposed on the land, the part 257 criteria apply. The Agency decided to include this provision in 257.1(c) to make it clear that sewage sludge used or disposed in accordance with part 503 is not subject to the part 257 requirements.

Another revision to part 257 in today's rulemaking amends the definition section (i.e., 257.2). In the 1989 proposal, 257.2 was proposed to be changed by amending the terms "sludge" and "solid waste" to indicate that sewage sludge is not a sludge or a solid waste. The Agency decided not to amend those definitions in today's amendment because certain sewage sludges are still subject to the part 257 requirements. Instead, the definition of "domestic septage" and "sewage sludge" are being added to 257.2. These terms are used in the revisions to 257.1.

The final revision in today's part 257 amendment concerns 257.3–4. This subsection is being changed by adding the phrase "with respect to sewage sludge that is not used or disposed through a practice regulated in 40 CFR part 503" after "* * * a violation of section 405(e) * * * ". Section 405(e) indicates that the determination of the manner of disposal or use of sewage sludge is a local determination. However, if the selected use or disposal practice is regulated under section 405(d) of the CWA, the requirements in 405(d) have to be met. Because part 257 is promulgated under the authority of 405(d) for sewage sludges that are not regulated under part 503, section 257.3–4(b)(1) is being amended to make it clear that a party charged with a violation of section 405(e) only with respect to sewage sludge not regulated under 40 CFR part 503 may demonstrate that compliance be determined at an alternative boundary in lieu of the solid waste boundary. This amendment does not apply to a party charged with open dumping.

The proposed part 257 amendment also indicated that the Agency was considering deleting paragraphs (b) and (c) in 257.3–6. Because part 257 continues to apply to certain sewage sludge disposed on the land, EPA decided not to delete those paragraphs. Paragraphs (b) and (c) still apply if sewage sludge is disposed on the land and if that sewage sludge is not used or disposed in accordance with part 503.

Amendment to 40 CFR Part 403

Today's amendment to 40 CFR part 403 contains an appendix with two lists of pollutants eligible for a removal credit with respect to the use or disposal of sewage sludge. The first list, G–I, contains the pollutants controlled for the various use or disposal practices regulated by the part 503 regulation. If a POTW complies with the part 503 pollutant limit for a part 503 use or disposal practice and complies with the other requirements in part 503 for that practice, the pollutant is eligible for a removal credit so long as other EPA procedural and substantive requirements found at 40 CFR 403.7 are met.

For an inorganic pollutant listed in G–I to be eligible for a removal credit when present in sewage sludge that is fired in a sewage sludge incinerator, the concentration of the pollutant in the sewage sludge cannot exceed the concentration calculated using the applicable equation in part 503. In addition, part 503 requires that the National Emission Standards for Beryllium and Mercury in subparts C and D of 40 CFR part 61, respectively, and the Standards of Performance for Sewage Treatment Plants in subpart O of 40 CFR part 60 not be violated if sewage sludge is fired in a sewage sludge incinerator. These requirements must be met before a removal credit can be granted for the inorganic pollutants.

Part 503 also limits total hydrocarbon (THC) in the exit gas from sewage sludge incinerator stacks. Although the THC limit is a technology-based operational standard, in the judgment of the Administrator of EPA that limit protects public health and the environment from the reasonably anticipated adverse affects of certain organic pollutants in the incinerator stack exit gas. The 503 proposal listed all of the organic pollutants for which there were Q^* values at that time. The final part 503 regulation also includes all organic pollutants for which there are Q^* values, including those for which the values were developed after the proposal. These pollutants are eligible for a removal credit with respect to the use or disposal of sewage sludge if the THC limit is met; if the Standards of Performance for Sewage Treatment Plants in subpart O of 40 CFR part 60 are not violated; and if the other removal credit requirements are met.

The second list, G–II in the appendix, lists certain pollutants by use or disposal practice and a concentration for each pollutant. The Agency

determined that the pollutants on the second list do not pose an unreasonable risk to public health and the environment if the concentrations for those pollutants in the sewage sludge are below the concentrations for the pollutants in G–II list.

Pollutants were placed on the list in G–II for one of two reasons. First, available data, which were based in large part on the results of the 40 City Study (Fate of Priority Pollutants in Publicly Owned Treatment Works. Vol. I, Washington, DC, U.S. EPA, 1984), at the time the original list of pollutants of concern for the part 503 regulation was developed indicated that the concentrations of the pollutants in sewage sludge do not exceed the concentrations for those pollutants on the G–II list. EPA determined that, at those concentrations, the pollutants do not pose a threat to public health and the environment at the highest levels detected, and that it was not necessary to expend additional resources to determine what the highest possible "safe level" would be. EPA decided that those pollutants are eligible for a removal credit with respect to the use or disposal of sewage sludge if the concentration of a pollutant in the sewage sludge does not exceed the concentration for the pollutant in G–II and if the treatment works complies with the applicable requirements in 40 CFR 403.7.

The second reason a pollutant was placed on the list in G–II is that, after determining a risk level for the pollutant, EPA decided not to regulate it in the final part 503 regulation. The concentration for those pollutants in G–II is the concentration developed during the risk assessment for the final part 503 regulation. A removal credit is available for those pollutants with respect to the use or disposal of sewage sludge if the concentration of the pollutant in the POTW's sewage sludge is less than or equal to the concentration for the pollutant in G–II and if the treatment works complies with the applicable requirements in 40 CFR 403.7. These pollutants are designated with an asterisk on the G–II list.

Proof that the pollutant concentrations in a POTW's sewage sludge do not exceed the pollutant concentrations on the G–II list must be provided in the Sludge Management Certification portion of a POTW's removal credit application (see 40 CFR 403.7(e)(4)(v)). No further monitoring of these pollutants is required unless required by a sewage sludge permit. If subsequent monitoring reveals that the concentration of the pollutant in the POTW's sewage sludge exceeds the levels in the G–II list or any more stringent limit in the POTW's sewage sludge permit, the POTW is no longer eligible for removal credit authority for that pollutant. See 40 CFR 403.7(f)(4).

If the concentration listed in G–II is below the limit of detection for the pollutant (i.e., for N-Nitrosodimethylamine), a POTW may be granted removal credit authority for that pollutant if the POTW shows that the actual concentration in the sewage sludge is below the detection limit, unless a sewage sludge permit imposes an actual limit below the detection limit.

Today's amendment also indicates that removal credit authority can be granted to POTWs whose sewage sludge is disposed of in a municipal solid waste landfill (MSWLF) that meets the criteria in 40 CFR part 258. Any pollutant in sewage sludge for which a categorical pretreatment standard has been developed is eligible for a removal credit because disposal of sewage sludge in a MSWLF that meets the criteria in 40 CFR part 258 constitutes compliance with section 405 of the Clean Water Act, as amended. EPA published the final part 258 regulations on October 11, 1991 (56 FR 50977).

To receive removal credit authority for a pollutant, a POTW also must comply with the limits in a sewage sludge permit. A permit writer might apply such limits if site-specific circumstances vary from the assumptions underlying the pollutant limits in today's rule. The POTW also must comply with any applicable provisions of the Clean Air Act and any more stringent State or local regulations to receive removal credit authority.

The remainder of the discussion on today's amendment to part 403 reviews the options considered during the development of the appendix G lists. Implementation of today's amendment also is discussed further below.

When the proposal for part 503 regulation was published in February 1989, the Agency proposed that removal credits be available with respect to the use or disposal of sewage sludge for two groups of pollutants. The first group included pollutants regulated in part 503; removal credits would be available for POTWs that complied with the part 503 requirements for the applicable use or disposal practice. The second group included pollutants not controlled in part 503 because at the highest concentrations detected in sewage sludge, these pollutants did not present an unreasonable risk to public health or the environment.

In a Notice of Availability of Information and Data from the National Sewage Sludge Survey and Request for Comments published in the **Federal Register** in November 1990, the Agency addressed whether removal credits should be available for pollutants not addressed in the initial part 503 regulation (known as "round one" regulation). The Agency proposed and invited comment in the Notice on four options concerning the eligibility of a pollutant for a removal credit with respect to the use or disposal of sewage sludge for a second round (i.e., round two) of pollutants and for pollutants not on either the "round one" or "round two" lists. The four options were:

Option 1—A categorical pretreatment standard pollutant is eligible for a removal credit only if EPA has either established a specific numerical limit for that pollutant in part 503 or has evaluated the pollutant and concluded that it does not threaten public health and the environment in sewage sludge that is used or disposed.

Option 2—A categorical pretreatment standard pollutant not controlled in the part 503 regulation for either "round one" or "round two" becomes eligible for a removal credit with respect to the use or disposal of sewage sludge when the part 503 "round two" regulation is promulgated.

Option 3—A categorical pretreatment standard pollutant not controlled in the part 503 regulation for "round one" becomes eligible for a removal credit with respect to the use or disposal of sewage sludge if not identified by EPA in the **Federal Register** as a pollutant that may be regulated in "round two."

Option 4—A categorical pretreatment standard pollutant not controlled in the part 503 regulation for "round one" becomes eligible for a removal credit with respect to the use or disposal of sewage sludge when the "round one" regulation is promulgated.

After consideration of all of the options and the comments addressing those options, EPA selected Option 1, which is included in today's amendment to part 403. Removal credit eligibility is limited to those pollutants regulated specifically in part 503 and to pollutants that the Agency determines do not threaten public health and the environment at specified concentrations. Many commenters supported Option 1 because that option provides such a clear statement as to which pollutants are eligible for a removal credit.

As mentioned previously, section 307(b) authorizes removal credits only if the resulting industrial discharges do "not prevent sludge use or disposal by such [POTW] in accordance with section 405 * * *". Section 307(b), 33

U.S.C. 1317(b). The Third Circuit in *NRDC* v. *EPA* interpreted this language to mean that removal credits only can be granted if the comprehensive standards under section 405(d) of the CWA, as amended, are in place. Congress affirmed the Third Circuit's holding by adopting section 406(e) of the Water Quality Act. The legislative history for section 406(e) indicates that Congress wanted standards to be developed and met prior to removal credits being authorized. As Senator Stafford, one of the sponsors of the Water Quality Act of 1987, pointed out (132 Cong. Rec. S16427, daily ed. October 16, 1986):

> * * * Congress intended the existence of sludge regulations, and compliance with those regulations, to be a precondition to the granting of removal credits.

Only then can it be determined if the granting of a removal credit for a specific pollutant results in contamination of the POTW's sewage sludge.

Although section 405 does not require a limit to be developed for pollutants that do not pose a risk, section 307(b) requires compliance with a section 405 standard for a POTW to be granted removal credit authority. The Agency has resolved the potential conflict between sections 307(b) and 405 by allowing a removal credit for pollutants not controlled in the part 503 regulation provided EPA determines that regulation is unnecessary to accomplish the objective of section 405 to protect public health and the environment from the reasonably anticipated adverse effects of the pollutant. Such a determination has been made with respect to the pollutants listed by use or disposal practice on the G–II list in today's amendment to part 403.

Note: Table 22 of the proposed rule erroneously listed cyanide among the pollutants for which removal credits would be available for sludge that is land applied or distributed and marketed; EPA has not evaluated the risk of cyanide in these practices and removal credits are not available for them. To correct this error, Table G–II in the final rule does not indicate that removal credits for cyanide are available where sewage sludge is land applied. The final rule also clarifies that "total cyanide", not "cyanide", is the parameter for which removal credits may be available for surface disposal.

EPA did not select Options 2 through 4, which would have made removal credits available for additional pollutants. Those options were premised on the assumption that "round one" and "round two" regulations address substantially all the universe of pollutants in sewage sludge that may pose a threat to public health and the environment. Whether that in fact will be the case is not known at this time. EPA will consider addressing in "round two" the remaining priority pollutants controlled by categorical pretreatment standards. If those pollutants are regulated in part 503, Options 2, 3, and 4 become obsolete.

EPA cannot make removal credits available for pollutants other than those listed in appendix G at this time because the Agency has not controlled other pollutants in part 503. EPA has not analyzed all of the data to determine whether other pollutants present a risk to public health and the environment in sewage sludge that is used or disposed.

Several comments were received on the four removal credit options in the 1990 Notice. The major comments are discussed below and a response to those comments is presented.

Some commenters recommended that removal credits be abolished altogether. Various reasons were given for these recommendations including that removal credits are inconsistent with pollution prevention, erode public confidence in sewage sludge quality, and are unnecessary because industry is already required to be in compliance with categorical pretreatment standards. Others opposed removal credits for any use or disposal practice except for beneficial use practices. Others opposed removal credits if the removal credits result in any deterioration of sewage sludge quality.

The above commenters misconstrued the scope of the removal credit amendment in today's rule. Moreover, regardless of the validity of the comments, section 307(b) of the Clean Water Act, as amended, provides that the owner or operator of a POTW may revise pretreatment standards, given compliance with the statute.

One environmental group commented that EPA could not make removal credits available for any pollutant until a limit is established for the pollutant. EPA believes it is consistent with the intent of CWA sections 307(b) and 405(d) to make removal credits available for pollutants present in sewage sludge at levels that EPA has determined do not affect public health and the environment adversely. The Agency decided not to regulate pollutants for which the concentration that protects public health and the environment is above any concentration that has been detected in sewage sludge. Such regulation would result in costly monitoring for no foreseeable benefit.

This same commenter stated that EPA could not make removal credits available unless EPA subjected the pollutant to the same analysis to which regulated pollutants were subjected. The Agency does not believe it is necessary to perform an equally intensive risk assessment for every pollutant for the pollutant to be eligible for a removal credit. The resources devoted to assessing a pollutant should be increased when there is an indication that a pollutant presents an unreasonable risk to public health and the environment. Relatively little information collection and analysis may be necessary if there is little or no evidence that a pollutant presents a risk when present in sewage sludge.

The CWA, as amended, does not specify the types or amount of studies that must be performed to support a decision to regulate a pollutant under section 405. It also does not require that limits be developed for pollutants that do not present a risk to public health or the environment or are not likely ever to be present in sewage sludge in concentrations that could present such a risk. The Agency does believe, however, that for the purposes of authorizing a removal credit under section 307(b), EPA must distinguish those pollutants that do not present a risk from those for which adequate data do not exist to allow such a determination. Although it is not necessary to develop section 405 standards for every pollutant for which a removal credit may be authorized, it is necessary for EPA to consider whether section 405 requires a pollutant to be regulated. The Agency believes that it has met this requirement with respect to the pollutants listed on the G–II list in today's amendment to part 403.

Commenters argued that EPA could not make any removal credits available based on EPA's analysis of data from the 40 City Study. Removal credits are available for the pollutants listed in G–II because, at the highest values shown, EPA determined they do not present an unreasonable risk for one or more use or disposal practices. Many of the pollutant concentrations in G–II are the highest concentrations detected in the 40 City Study. At the time of the February 1989 proposal, EPA decided not to subject these pollutants to the full-scale risk assessment to which pollutants proposed for regulation were subjected. Because EPA had already determined that the pollutants do not pose a threat to public health and the environment at the highest levels detected, it was not necessary to expend additional resources to determine what the highest possible "safe level" would be. EPA decided it should instead concentrate its resources on studying those pollutants that EPA's preliminary

assessments indicated might pose a risk at existing levels.

EPA recognizes that the data from the National Sewage Sludge Survey (NSSS) is more reflective of current sewage sludge quality than the data from the 40 City Study. It may in fact be the case that EPA's analysis of the NSSS data during "round two" will indicate that certain pollutants on the G–II list are present in concentrations that merit regulation. The fact that the 40 City Study may have given an inaccurate indication of the maximum concentration of a pollutant present in any sewage sludge does not, however, change EPA's conclusion that the pollutants are "safe" at the 40 City Study levels. Examination of the NSSS data on the concentrations of these pollutants may lead to a conclusion that the "safe level" may be higher than the 40 City Study levels or may lead to a conclusion that these pollutants need to be regulated. This will not, in the absence of other information, change EPA's determination that the lower levels detected in the 40 City Study are "safe".

Also included on the G–II list are concentrations for organic pollutants based on the results of the risk assessment for the part 503 regulation. These pollutants were deleted from the part 503 regulation for various reasons after the part 503 risk assessment was completed. The concentrations for these pollutants in G–II are the concentrations based on the results of the part 503 risk assessment. If the concentration for the pollutant is below the concentration on the G–II list, public health and the environment are protected from the reasonably anticipated adverse effects of the pollutants in sewage sludge that is used or disposed. These pollutants are marked with an asterisk on the G–II list.

Some commenters argued that removal credits must be made available for any pollutant not regulated by the final part 503 regulation. The Agency believes, however, that the CWA, as amended, only allows removal credits for the pollutants in appendix G. When read together, sections 307(b) and 405 permit removal credits only when it can be determined that the increased concentrations or amounts allowed by the removal credit does not affect sewage sludge use or disposal adversely. It may in fact be the case that the use or disposal of sewage sludge is not affected adversely by some pollutants for which standards are not being promulgated today. For pollutants other than those in appendix G, it cannot be determined, however, whether pollutants were not selected for regulation because they were believed to be "safe" or because there are not adequate data to determine a "safe level". As previously noted, for example, dioxin is not a pollutant that is regulated in this rulemaking today. Dioxins, which may be present in sewage sludge, are not regulated not because they are believed safe but because at the time EPA initially screened pollutants for regulation it lacked data to evaluate dioxins for regulation.

Some commenters assumed incorrectly that the pollutants on Table III–3 in the preamble for the proposed part 503 regulation were the only pollutants for which EPA lacked adequate data to establish a "safe level". Table III–3 listed the pollutants that were recommended for further study but for which a positive determination was made subsequently that EPA lacked sufficient data to establish a safe level. There are other pollutants that may have not been recommended for study because EPA lacked data regarding the risk they presented.

In the view of some commenters, this approach excludes unfairly from removal credit eligibility pollutants that may represent little or no threat to public health and the environment simply because EPA has not evaluated them formally for environmental threat. EPA recognizes that the part 503 pollutants regulated in "Round One" generally represent those pollutants in sewage sludge with the greatest potential for threatening public health and the environment. However, it must be recognized that the decision to regulate some pollutants and not others was in part based on the availability of information on the pollutants. EPA solicited comments and data to support whether additional or fewer pollutants should be regulated but received little response. The decision not to regulate does not necessarily mean that the unregulated pollutants may not threaten public health and the environment.

EPA solicited comment on whether, in those cases where the Agency regulates 4AAP (a test measurement) as an indicator for various phenolic compounds, removal credits should be allowed for all of the compounds represented by 4AAP although only the parent compound phenol and certain other phenolic compounds were subject to environmental assessments in this rulemaking. Commenters did not provide EPA with data that 4AAP reflects the different phenolic compounds in wastewater. Therefore, removal credits only are available for the specific phenolic compounds listed on the G–II in the appendix to today's part 403 amendment.

EPA solicited comment whether a specific categorical pretreatment standard pollutant not regulated in part 503 should be eligible for a removal credit and whether the concentrations on the G–II list were appropriate. One commenter noted that the demonstration procedure is so costly and time consuming that it is unlikely that additional chemicals would be added before the deadline for categorical standards. EPA notes that the degree of information and expense required should increase with evidence of risk, but that in any case, EPA's decisions must be based on such information. The only detailed data submitted to EPA addressed the adequacy of the cap for chromium. After further analysis of all available data regarding chromium in sewage sludge, EPA decided to regulate chromium in part 503. For this reason, chromium is listed on the G–I lists rather than on the G–II list.

The concentrations listed on the G–II list are a cap for the availability of removal credits for the pollutants by use or disposal practice. EPA will study the NSSS data during "Round Two" for the part 503 regulation to determine whether these levels should be raised or if the pollutants should be regulated at some other level. If an industrial discharger believes that removal credit authority should be made available for a pollutant that is present in a POTW's sewage sludge at a higher level than the level on the G–II list, the industry should provide to EPA information on those concentrations and any information of the risk presented by such concentrations.

One commenter recommended that removal credits be available for pollutants that cannot be detected in a POTW's sewage sludge. The "safe level" might be below the detection limit for some or all test procedures. The Agency believes, therefore, that it must determine the "safe level" of a pollutant before removal credit authority can be granted for that pollutant.

This commenter listed several pollutants found rarely in sewage sludge sampled in the National Sewage Sludge Survey. EPA has not yet analyzed the data on these pollutants to determine if it is adequate to support a decision not to regulate the pollutants. Before a removal credit can be authorized, EPA has to at least establish that the highest detected levels do not present a risk. The Agency hopes to perform that analysis for the "Round Two" part 503 regulation. Before that time, removal credits only are available for the pollutants listed in G–I or G–II.

Another commenter recommended that EPA consider allowing a POTW to grant a removal credit for any pollutant that cannot be detected in the POTW's effluent. This is not within the scope of this rulemaking. The Agency notes, however, that the burden of proof is on the POTW that seeks removal credit authority to establish that it is accomplishing consistent removal of the pollutant. The methods by which consistent removal can be established is not the subject of today's rule (see 40 CFR 403.7(b)(1)).

Prior to 1986, one POTW was authorized to grant removal credits for ammonia and oil and grease. This POTW commented that EPA should clarify that removal credits are available for conventional and non-conventional pollutants. As discussed above, EPA has determined that before it can make removal credits available for a particular pollutant not regulated under Part 503, it needs to determine that regulation of that pollutant is not necessary to protect public health and the environment from the reasonably anticipated adverse effects of that pollutant. Ammonia and oil and grease are not regulated under today's final part 503 standards and EPA has not made the necessary determination that regulation is not necessary. Removal credits for ammonia and oil and grease, therefore, are not available at this time. However, as previously explained, EPA will evaluate a number of pollutants for regulation in "Round Two." Its conclusions about which pollutants may be proposed for regulation in "Round Two" must be made by late May, 1993. EPA is considering at this time not only which pollutants may be proposed for regulation but also the process for determining how to evaluate unregulated pollutants for removal credit purposes.

With respect to implementation of a removal credit, publication of the part 503 regulation does not entitle a POTW automatically to removal credit authority for a pollutant. The POTW must manage all of the sewage sludge in compliance with the use or disposal practice covered by part 503; removal credits may not be authorized before the part 503 requirements are met. To be eligible for removal credit authority, the POTW must comply, with the substantive use or disposal practice requirements and any requirement related to sewage sludge use or disposal for each pollutant for which it seeks removal credit authority. POTWs that dispose of sewage sludge in a municipal solid waste landfill that complies with the criteria in 40 CFR part 258 also may obtain removal credit authority for any categorical pretreatment standard pollutant in the sewage sludge placed in the MSWLF.

To obtain removal credit authority, a POTW must apply to EPA or to a State that has been approved to administer the Pretreatment Program. The application for removal credit authority must demonstrate that the POTW is in compliance with the removal credit regulations in 40 CFR 403.7. Only POTWs may submit the application; industrial facilities cannot apply, although they may assist the POTW in preparing an application. A POTW must have an approved pretreatment program at the time removal credit authority is granted and may extend all or part of any authorized removal credit to an industrial user.

In addition to establishing compliance with the conditions applicable to the use or disposal of sewage sludge, the POTW's removal credit application must provide data on the percentage of each pollutant removed from the wastewater consistently by the POTW. Removal credits cannot be granted if they cause the POTW to violate its NPDES permit. If the POTW is subject to combined sewer overflows, the application must establish that the POTW is taking certain actions to eliminate the combined sewer overflows. Each of these requirements is described more fully in 40 CFR 403.7.

Complete applications are reviewed by EPA or a State that has been approved to administer the Pretreatment Program. When the application is submitted to an Approved State, EPA Regions have the right to review and object to a State's approval of a submission, unless the right has been waived in the Region's Memorandum of Agreement with the State. After a period of review and public comment, removal credit authority may be granted to any POTW that complies with the procedural and substantive requirements of the removal credits regulations. Following approval, POTWs must continue to sample monthly to demonstrate continued removal of the pollutant. The POTW's demonstrated consistent pollutant removal becomes an enforceable part of its NPDES permit. Authority to grant a removal credit can be modified or withdrawn if a POTW fails to continue to achieve consistent removal, fails to comply with part 503 requirements, or no longer satisfies any other requirement of 40 CFR 403.7.

List of Subjects

40 CFR Part 257

Facilities and practices, Sewage sludge, Sludge, and Solid waste.

40 CFR Part 403

Incineration, Land application, Pollutants, Removal credits, Sewage sludge, and Surface disposal.

40 CFR Part 503

Frequency of monitoring, Incineration, Incorporation by reference, Land application, Management practices, Pathogens, Pollutants, Reporting and recordkeeping requirements, Sewage sludge, Surface disposal, and Vector attraction.

Dated: November 25, 1992.

F. Henry Hubicht II,

Acting Administrator.

For reasons set out in the preamble, title 40 of the Code of Federal Regulations is amended as set forth below:

PART 257—CRITERIA FOR CLASSIFICATION OF SOLID WASTE DISPOSAL FACILITIES AND PRACTICES

1. The authority citation for 40 CFR part 257 continues to read as follows:

Authority: 42 U.S.C. 6907(a)(3), 6944(a) and 6949(c), 33 U.S.C. 1345 (d) and (e).

2. Section 257.1 is amended by revising paragraphs (b) and (c)(3) to read as follows and by adding a new paragraph (c)(11) to read as follows:

§ 257.1 Scope and purpose.

* * * * *

(b) These criteria also provide guidelines for the disposal of sewage sludge on the land when the sewage sludge is not used or disposed through a practice regulated in 40 CFR part 503.

(c) * * *

(3) The criteria do not apply to the land application of domestic sewage or treated domestic sewage.

* * * * *

(11) The criteria do not apply to the use or disposal sewage sludge on the land when the sewage sludge is used or disposed in accordance with 40 CFR part 503.

3. Section 257.2 is amended by adding definitions in alphabetical order for "domestic septage" and "sewage sludge" to read as follows:

§ 257.2 Definitions.

* * * * *

Domestic septage is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar

treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

* * * * *

Sewage sludge means solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

* * * * *

4. Section 257.3–4 is amended by revising paragraph (b)(1) introductory text to read as follows:

§ 257.3–4 Ground water.

* * * * *

(b)(1) For purposes of section 1008(a)(3) of the Act or section 405(d) of the CWA, a party charged with open dumping or a violation of section 405(e) with respect to sewage sludge that is not used or disposed through a practice regulated in 40 CFR part 503 may demonstrate that compliance should be determined at an alternative boundary in lieu of the solid waste boundary. The court shall establish an alternative boundary only if it finds that such a change would not result in contamination of ground water which may be needed or used for human consumption. This finding shall be based on analysis and consideration of all of the following factors that are relevant:

* * * * *

PART 403—GENERAL PRETREATMENT REGULATIONS FOR EXISTING AND NEW SOURCES OF POLLUTION

1. The authority citation for 40 CFR part 403 continues to read as follows:

Authority: Sec. 54(c)(2) of the Clean Water Act of 1977, (Pub. L. 95–217) sections 204(b)(1)(C), 208(b)(2)(C)(iii), 301(b)(1)(A)(ii), 301(b)(2)(A)(ii), 301(b)(2)(C), 301(h)(5), 301(i)(2), 304(e), 304(g), 307, 308, 309, 402(b), 405 and 501(a) of the Federal Water Pollution Control Act (Pub. L. 92–500) as amended by the Clean Water Act of 1977 and the Water Quality Act of 1987 (Pub. L. 100–4).

2. Section 403.7 is amended by adding a sentence to the end of paragraph (a)(3)(iv) and by adding paragraphs (a)(3)(iv) (A) through (C) to read as follows:

§ 403.7 Removal credits.

(a) * * *

(3) * * *

(iv) * * * Removal credits may be made available for the following pollutants.

(A) For any pollutant listed in appendix G section I of this part for the use or disposal practice employed by the POTW, when the requirements in 40 CFR part 503 for that practice are met.

(B) For any pollutant listed in appendix G section II of this part for the use or disposal practice employed by the POTW when the concentration for a pollutant listed in appendix G section II of this part in the sewage sludge that is used or disposed does not exceed the concentration for the pollutant in appendix G section II of this part.

(C) For any pollutant in sewage sludge when the POTW disposes all of its sewage sludge in a municipal solid waste landfill unit that meets the criteria in 40 CFR part 258.

* * * * *

3. 40 CFR part 403 is amended by adding appendix G to read as follows:

Appendix G to Part 403—Pollutants Eligible for a Removal Credit

I. Regulated Pollutants in Part 503 Eligible for a Removal Credit

Pollutant	Use or disposal practice		
	LA	SD	I
Arsenic	X	X	X.
Beryllium	.....	.....	X.
Cadmium	X	.....	X.
Chromium	X	X	X.
Copper	X	.....	
Lead	X	.....	X.
Mercury	X	.....	X.
Molybdenum	X	.....	
Nickel	X	X	X.
Selenium	X	.....	
Zinc	X	.....	
Total hydrocarbons	.....	.....	X(1).

Key: LA—land application, SD—surface disposal site without a liner and leachate collection system, I—firing of sewage sludge in a sewage sludge incinerator.

(1) The following organic pollutants are eligible for a removal credit if the requirements for total hydrocarbons in subpart E in 40 CFR part 503 are met when sewage sludge is fired in a sewage sludge incinerator: Acrylonitrile, Aldrin/Dieldrin (total), Benzene, Benzidine, Benzo(a)pyrene, Bis(2-chloroethyl)ether, Bis(2-ethylhexyl)phthalate, Bromodichloromethane, Bromoethane, Bromoform, Carbon tetrachloride, Chlordane, Chloroform, Chloromethane, DDD,DDE,DDT, Dibromochloromethane, Dibutyl phthalate, 1,2-dichloroethane, 1,1-dichloroethylene, 2,4-dichlorophenol 1,3-dichloropropene, Diethyl phthalate, 2,4-dinitrophenol, 1,2-diphenylhydrazine, Di-n-butyl phthalate, Endosulfan, Endrin, Ethylbenzene, Heptachlor, Heptachlor epoxide, Hexachlorobutadiene, Alpha-hexachlorocyclohexane, Betahexachlorocyclohexane, Hexachlorocyclopentadiene, Hexachloroethane, Hydrogen cyanide, Isophorone, Lindane, Methylene chloride, Nitrobenzene, N-Nitrosodimethylamine, N-Nitrosodi-n-propylamine, Pentachlorophenol, Phenol, Polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzo-p-dioxin, 1,1,2,2,-tetrachloroethane, Tetrachloroethylene, Toluene, Toxaphene, Trichloroethylene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, and 2,4,6-Trichlorophenol.

II. Additional Pollutants Eligible for a Removal Credit (milligrams per kilogram—dry weight basis)

Pollutant	Use or disposal practice			
	LA	(SD)		I
		Unlined [1]	Lined [2]	
Arsenic	.....	.....	[3]100	.....
Aldrin/Dieldrin (Total)	2.7	.....	.....	.....
Benzene	[3]16	140	[illegible]	.....
Benzo(a)pyrene	15	[3]100	[3]100	.....
Bis(2-ethylhexyl)phthalate	.....	[3]100	100	.....
Cadmium	.....	[3]100	[3]100	.....
Chlordane	66	[3]100	[3]100	.....

Pollutant	Use or disposal practice			
	LA	SD		I
		Unlined[1]	Lined[2]	
Chromium			[3]100	
Copper		[3]46	[3]100	1400
DDD, DDE, DDT (Total)	1.2	2000	2000	
2,4 Dichlorophenoxy-acetic acid		7	7	
Fluoride	730			
Heptachlor	7.4			
Hexachlorobenzene	29			
Hexachlorobutadiene	600			
Iron	[3]76			
Lead		[3]100	[3]100	
Lindane	114	[3]28	[3]28	
Malathion		0.02	0.02	
Mercury		[3]100	[3]100	
Molybdenum		40	40	
Nickel			[3]100	
N-Nitrosodimethylamine	2.1	0.068	0.068	
Pentachlorophenol	30			
Phenol		82	82	
Polychlorinated biphenyls	4.0	<50	<50	
Selenium		4.8	4.8	4.8
Toxaphene	10	[3]26	[3]26	
Trichloroethylene	[3]10	5500	[3]10	
Zinc		4500	4500	4500

Key: LA—land application, SD—surface disposal, I—incineration.
[1] Sewage sludge unit without a liner and leachate collection system.
[2] Sewage sludge unit with a liner and leachate collection system.
[3] Value expressed in grams per kilogram—dry weight basis.

Subchapter O in chapter I of title 40 of the Code of Federal Regulations is amended by adding part 503, which reads as follows:

SUBCHAPTER O—SEWAGE SLUDGE

PART 503—STANDARDS FOR THE USE OR DISPOSAL OF SEWAGE SLUDGE

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Subpart D—Pathogens and Vector Attraction Reduction

503.30 Scope.
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Subpart E—Incineration

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503.41 Special definitions.
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503.43 Pollutant limits.
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503.45 Management practices.
503.46 Frequency of monitoring.
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503.48 Reporting.

Appendix A to Part 503—Procedure to Determine the Annual Whole Sludge Application Rate for a Sewage Sludge

Appendix B to Part 503—Pathogen Treatment Processes

Authority: Sections 405 (d) and (e) of the Clean Water Act, as amended by Pub. L. 95–217, Sec. 54(d), 91 Stat. 1591 (33 U.S.C. 1345 (d) and (e)); and Pub. L. 100–4, Title IV, Sec. 406 (a), (b), 101 Stat., 71, 72 (33 U.S.C. 1251 *et seq.*).

Subpart A—General Provisions

§ 503.1 Purpose and applicability.

(a) *Purpose.* (1) This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are pathogen and alternative vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site.

(2) In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more.

(b) *Applicability.* (1) This part applies to any person who prepares sewage sludge, applies sewage sludge to the land, or fires sewage sludge in a sewage sludge incinerator and to the owner/operator of a surface disposal site.

(2) This part applies to sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

(3) This part applies to the exit gas from a sewage sludge incinerator stack.

(4) This part applies to land where sewage sludge is applied, to a surface disposal site, and to a sewage sludge incinerator.

§ 503.2 Compliance period.

(a) Compliance with the standards in this part shall be achieved as expeditiously as practicable, but in no case later than February 19, 1994. When compliance with the standards requires construction of new pollution control facilities, compliance with the standards shall be achieved as expeditiously as practicable, but in no case later than February 19, 1995.

(b) The requirements for frequency of monitoring, recordkeeping, and reporting in this part for total hydrocarbons in the exit gas from a sewage sludge incinerator are effective February 19, 1994 or, if compliance with the operational standard for total hydrocarbons in this part requires the construction of new pollution control facilities, February 19, 1995.

(c) All other requirements for frequency of monitoring, recordkeeping, and reporting in this part are effective on July 20, 1993.

§ 503.3 Permits and direct enforceability.

(a) Permits. The requirements in this part may be implemented through a permit:

(1) Issued to a "treatment works treating domestic sewage", as defined in 40 CFR 122.2, in accordance with 40 CFR parts 122 and 124 by EPA or by a State that has a State sludge management program approved by EPA in accordance with 40 CFR part 123 or 40 CFR part 501 or

(2) Issued under subtitle C of the Solid Waste Disposal Act; part C of the Safe Drinking Water Act; the Marine Protection, Research, and Sanctuaries Act of 1972; or the Clean Air Act. "Treatment works treating domestic sewage" shall submit a permit application in accordance with either 40 CFR 122.21 or an approved State program.

(b) Direct enforceability. No person shall use or dispose of sewage sludge through any practice for which requirements are established in this part except in accordance with such requirements.

§ 503.4 Relationship to other regulations.

Disposal of sewage sludge in a municipal solid waste landfill unit, as defined in 40 CFR 258.2, that complies with the requirements in 40 CFR part 258 constitutes compliance with section 405(d) of the CWA. Any person who prepares sewage sludge that is disposed in a municipal solid waste landfill unit shall ensure that the sewage sludge meets the requirements in 40 CFR part 258 concerning the quality of materials disposed in a municipal solid waste landfill unit.

§ 503.5 Additional or more stringent requirements.

(a) On a case-by-case basis, the permitting authority may impose requirements for the use or disposal of sewage sludge in addition to or more stringent than the requirements in this part when necessary to protect public health and the environment from any adverse effect of a pollutant in the sewage sludge.

(b) Nothing in this part precludes a State or political subdivision thereof or interstate agency from imposing requirements for the use or disposal of sewage sludge more stringent than the requirements in this part or from imposing additional requirements for the use or disposal of sewage sludge.

§ 503.6 Exclusions.

(a) *Treatment processes.* This part does not establish requirements for processes used to treat domestic sewage or for processes used to treat sewage sludge prior to final use or disposal, except as provided in § 503.32 and § 503.33.

(b) *Selection of a use or disposal practice.* This part does not require the selection of a sewage sludge use or disposal practice. The determination of the manner in which sewage sludge is used or disposed is a local determination.

(c) *Co-firing of sewage sludge.* This part does not establish requirements for sewage sludge co-fired in an incinerator with other wastes or for the incinerator in which sewage sludge and other wastes are co-fired. Other wastes do not include auxiliary fuel, as defined in 40 CFR 503.41(b), fired in a sewage sludge incinerator.

(d) *Sludge generated at an industrial facility.* This part does not establish requirements for the use or disposal of sludge generated at an industrial facility during the treatment of industrial wastewater, including sewage sludge generated during the treatment of industrial wastewater combined with domestic sewage.

(e) *Hazardous sewage sludge.* This part does not establish requirements for the use or disposal of sewage sludge determined to be hazardous in accordance with 40 CFR part 261.

(f) *Sewage sludge with high PCB concentration.* This part does not establish requirements for the use or disposal of sewage sludge with a concentration of polychlorinated biphenyls (PCBs) equal to or greater than 50 milligrams per kilogram of total solids (dry weight basis).

(g) *Incinerator ash.* This part does not establish requirements for the use or disposal of ash generated during the firing of sewage sludge in a sewage sludge incinerator.

(h) *Grit and screenings.* This part does not establish requirements for the use or disposal of grit (e.g., sand, gravel, cinders, or other materials with a high specific gravity) or screenings (e.g., relatively large materials such as rags) generated during preliminary treatment of domestic sewage in a treatment works.

(i) *Drinking water treatment sludge.* This part does not establish requirements for the use or disposal of sludge generated during the treatment of either surface water or ground water used for drinking water.

(j) *Commercial and industrial septage.* This part does not establish requirements for the use or disposal of commercial septage, industrial septage, a mixture of domestic septage and commercial septage, or a mixture of domestic septage and industrial septage.

§ 503.7 Requirement for a person who prepares sewage sludge.

Any person who prepares sewage sludge shall ensure that the applicable requirements in this part are met when the sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

§ 503.8 Sampling and analysis.

(a) *Sampling.* Representative samples of sewage sludge that is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator shall be collected and analyzed.

(b) *Methods.* The materials listed below are incorporated by reference in this part. These incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The materials are incorporated as they exist on the date of approval, and notice of any change in these materials will be published in the **Federal Register**. They are available for inspection at the Office of the Federal Register, 7th Floor, suite 700, 800 North Capitol Street, NW., Washington, DC, and at the Office of Water Docket, room L–102, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC. Copies may be obtained from the standard producer or publisher listed in the regulation. Methods in the materials listed below shall be used to analyze samples of sewage sludge.

(1) *Enteric viruses.* ASTM Designation: D 4994–89, "Standard Practice for Recovery of Viruses From Wastewater Sludges", 1992 Annual Book of ASTM Standards: Section 11—Water and Environmental Technology, ASTM, 1916 Race Street, Philadelphia, PA 19103–1187.

(2) *Fecal coliform.* Part 9221 E. or Part 9222 D., "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005.

(3) *Helminth ova.* Yanko, W.A., "Occurrence of Pathogens in Distribution and Marketing Municipal Sludges", EPA 600/1–87–014, 1987. National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (PB 88–154273/AS).

(4) *Inorganic pollutants.* "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW–846, Second Edition (1982) with Updates I (April 1984) and II (April 1985) and Third Edition (November 1986) with Revision I (December 1987). Second Edition and Updates I and II are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (PB–87–120–291). Third Edition and Revision I are available from Superintendent of Documents, Government Printing Office, 941 North Capitol Street, NE., Washington, DC 20002 (Document Number 955–001–00000–1).

(5) *Salmonella sp. bacteria.* Part 9260 D., "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005; or

Kenner, B.A. and H.P. Clark, "Detection and enumeration of *Salmonella* and *Pseudomonas aeruginosa*", Journal of the Water Pollution Control Federation, Vol. 46, no. 9, September 1974, pp. 2163–2171. Water Environment Federation, 601 Wythe Street, Alexandria, Virginia 22314.

(6) *Specific oxygen uptake rate.* Part 2710 B., "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005.

(7) *Total, fixed, and volatile solids.* Part 2540 G., "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005.

§ 503.9 General definitions.

(a) *Apply sewage sludge or sewage sludge applied to the land* means land application of sewage sludge.

(b) *Base flood* is a flood that has a one percent chance of occurring in any given year (i.e., a flood with a magnitude equalled once in 100 years).

(c) *Class I sludge management facility* is any publicly owned treatment works (POTW), as defined in 40 CFR 501.2, required to have an approved pretreatment program under 40 CFR 403.8(a) (including any POTW located in a State that has elected to assume local program responsibilities pursuant to 40 CFR 403.10(e)) and any treatment works treating domestic sewage, as defined in 40 CFR 122.2, classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

(d) *Cover crop* is a small grain crop, such as oats, wheat, or barley, not grown for harvest.

(e) *CWA* means the Clean Water Act (formerly referred to as either the Federal Water Pollution Act or the Federal Water Pollution Control Act Amendments of 1972), Public Law 92–500, as amended by Public Law 95–217, Public Law 95–576, Public Law 96–483, Public Law 97–117, and Public Law 100–4.

(f) *Domestic septage* is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

(g) *Domestic sewage* is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

(h) *Dry weight basis* means calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass (i.e., essentially 100 percent solids content).

(i) *EPA* means the United States Environmental Protection Agency.

(j) *Feed crops* are crops produced primarily for consumption by animals.

(k) *Fiber crops* are crops such as flax and cotton.

(l) *Food crops* are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

(m) *Ground water* is water below the land surface in the saturated zone.

(n) *Industrial wastewater* is wastewater generated in a commercial or industrial process.

(o) *Municipality* means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201(e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use, or disposal of sewage sludge.

(p) *Permitting authority* is either EPA or a State with an EPA-approved sludge management program.

(q) *Person* is an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

(r) *Person who prepares sewage sludge* is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

(s) *Place sewage sludge or sewage sludge placed* means disposal of sewage sludge on a surface disposal site.

(t) *Pollutant* is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

(u) *Pollutant limit* is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of a pollutant that can be applied to a unit area of land (e.g., kilograms per hectare); or the volume of a material that can be

applied to a unit area of land (e.g., gallons per acre).

(v) *Runoff* is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off of the land surface.

(w) *Sewage sludge* is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

(x) *State* is one of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, and an Indian Tribe eligible for treatment as a State pursuant to regulations promulgated under the authority of section 518(e) of the CWA.

(y) *Store or storage of sewage sludge* is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

(z) *Treat or treatment of sewage sludge* is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

(aa) *Treatment works* is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

(bb) *Wetlands* means those areas that are inundated or saturated by surface water or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Subpart B—Land Application

§ 503.10 Applicability.

(a) This subpart applies to any person who prepares sewage sludge that is applied to the land, to any person who applies sewage sludge to the land, to sewage sludge applied to the land, and to the land on which sewage sludge is applied.

(b)(1) *Bulk sewage sludge.* The general requirements in § 503.12 and the management practices in § 503.14 do not apply when bulk sewage sludge is applied to the land if the bulk sewage sludge meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(2) The Regional Administrator of EPA or, in the case of a State with an approved sludge management program, the State Director, may apply any or all of the general requirements in § 503.12 and the management practices in § 503.14 to the bulk sewage sludge in § 503.10(b)(1) on a case-by-case basis after determining that the general requirements or management practices are needed to protect public health and the environment from any reasonably anticipated adverse effect that may occur from any pollutant in the bulk sewage sludge.

(c)(1) The general requirements in § 503.12 and the management practices in § 503.14 do not apply when a bulk material derived from sewage sludge is applied to the land if the derived bulk material meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(2) The Regional Administrator of EPA or, in the case of a State with an approved sludge management program, the State Director, may apply any or all of the general requirements in § 503.12 or the management practices in § 503.14 to the bulk material in § 503.10(c)(1) on a case-by-case basis after determining that the general requirements or management practices are needed to protect public health and the environment from any reasonably anticipated adverse effect that may occur from any pollutant in the bulk sewage sludge.

(d) The requirements in this subpart do not apply when a bulk material derived from sewage sludge is applied to the land if the sewage sludge from which the bulk material is derived meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(e) *Sewage sludge sold or given away in a bag or other container for application to the land.* The general requirements in § 503.12 and the management practices in § 503.14 do not apply when sewage sludge is sold or given away in a bag or other container for application to the land if the sewage sludge sold or given away in a bag or other container for application to the land meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(f) The general requirements in § 503.12 and the management practices in § 503.14 do not apply when a material derived from sewage sludge is sold or given away in a bag or other container for application to the land if the derived material meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

(g) The requirements in this subpart do not apply when a material derived from sewage sludge is sold or given away in a bag or other container for application to the land if the sewage sludge from which the material is derived meets the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8).

§ 503.11 Special definitions.

(a) *Agricultural land* is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

(b) *Agronomic rate* is the whole sludge application rate (dry weight basis) designed:

(1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and

(2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

(c) *Annual pollutant loading rate* is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

(d) *Annual whole sludge application rate* is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

(e) *Bulk sewage sludge* is sewage sludge that is not sold or given away in a bag or other container for application to the land.

(f) *Cumulative pollutant loading rate* is the maximum amount of an inorganic pollutant that can be applied to an area of land.

(g) *Forest* is a tract of land thick with trees and underbrush.

(h) *Land application* is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

(i) *Monthly average* is the arithmetic mean of all measurements taken during the month.

(j) *Other container* is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

(k) *Pasture* is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

(l) *Public contact site* is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

(m) *Range land* is open land with indigenous vegetation.

(n) *Reclamation site* is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

§ 503.12 General requirements.

(a) No person shall apply sewage sludge to the land except in accordance with the requirements in this subpart.

(b) No person shall apply bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates in § 503.13(b)(2) has been reached.

(c) No person shall apply domestic septage to agricultural land, forest, or a reclamation site during a 365 day period if the annual application rate in § 503.13(c) has been reached during that period.

(d) The person who prepares bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall provide the person who applies the bulk sewage sludge written notification of the concentration of total nitrogen (as N on a dry weight basis) in the bulk sewage sludge.

(e)(1) The person who applies sewage sludge to the land shall obtain information needed to comply with the requirements in this subpart.

(2)(i) Before bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) is applied to the land, the person who proposes to apply the bulk sewage sludge shall contact the permitting authority for the State in which the bulk sewage sludge will be applied to determine whether bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) has been applied to the site since July 20, 1993.

(ii) If bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) has not been applied to the site since July 20, 1993, the cumulative amount for each pollutant listed in Table 2 of § 503.13 may be applied to the site in accordance with § 503.13(a)(2)(i).

(iii) If bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk sewage sludge since that date is known, the cumulative amount of each pollutant applied to the site shall be used to determine the additional amount of each pollutant that can be applied to the site in accordance with § 503.13(a)(2)(i).

(iv) If bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) has been applied to the site since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk sewage sludge since that date is not known, an additional amount of each pollutant shall not be applied to the site in accordance with § 503.13(a)(2)(i).

(f) When a person who prepares bulk sewage sludge provides the bulk sewage sludge to a person who applies the bulk sewage sludge to the land, the person who prepares the bulk sewage sludge shall provide the person who applies the sewage sludge notice and necessary information to comply with the requirements in this subpart.

(g) When a person who prepares sewage sludge provides the sewage sludge to another person who prepares the sewage sludge, the person who provides the sewage sludge shall provide the person who receives the sewage sludge notice and necessary information to comply with the requirements in this subpart.

(h) The person who applies bulk sewage sludge to the land shall provide the owner or lease holder of the land on which the bulk sewage sludge is applied notice and necessary information to comply with the requirements in this subpart.

(i) Any person who prepares bulk sewage sludge that is applied to land in a State other than the State in which the bulk sewage sludge is prepared shall provide written notice, prior to the initial application of bulk sewage sludge to the land application site by the applier, to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:

(1) The location, by either street address or latitude and longitude, of each land application site.

(2) The approximate time period bulk sewage sludge will be applied to the site.

(3) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk sewage sludge.

(4) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.

(j) Any person who applies bulk sewage sludge subject to the cumulative pollutant loading rates in § 503.13(b)(2) to the land shall provide written notice, prior to the initial application of bulk sewage sludge to a land application site by the applier, to the permitting authority for the State in which the bulk sewage sludge will be applied and the permitting authority shall retain and provide access to the notice. The notice shall include:

(1) The location, by either street address or latitude and longitude, of the land application site.

(2) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) of the person who will apply the bulk sewage sludge.

§ 503.13 Pollutant limits.

(a) Sewage sludge. (1) Bulk sewage sludge or sewage sludge sold or given away in a bag or other container shall not be applied to the land if the concentration of any pollutant in the sewage sludge exceeds the ceiling concentration for the pollutant in Table 1 of § 503.13.

(2) If bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site, either:

(i) The cumulative loading rate for each pollutant shall not exceed the cumulative pollutant loading rate for the pollutant in Table 2 of § 503.13; or

(ii) The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of § 503.13.

(3) If bulk sewage sludge is applied to a lawn or a home garden, the concentration of each pollutant in the

sewage sludge shall not exceed the concentration for the pollutant in Table 3 of § 503.13.

(4) If sewage sludge is sold or given away in a bag or other container for application to the land, either:

(i) The concentration of each pollutant in the sewage sludge shall not exceed the concentration for the pollutant in Table 3 of § 503.13; or

(ii) The product of the concentration of each pollutant in the sewage sludge and the annual whole sludge application rate for the sewage sludge shall not cause the annual pollutant loading rate for the pollutant in Table 4 of § 503.13 to be exceeded. The procedure used to determine the annual whole sludge application rate is presented in appendix A of this part.

(b) Pollutant concentrations and loading rates—sewage sludge.

(1) Ceiling concentrations.

TABLE 1 OF § 503.13.—CEILING CONCENTRATIONS

Pollutant	Ceiling concentration (milligrams per kilogram)[1]
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

[1] Dry weight basis.

(2) Cumulative pollutant loading rates.

TABLE 2 OF § 503.13.—CUMULATIVE POLLUTANT LOADING RATES

Pollutant	Cumulative pollutant loading rate (kilograms per hectare)
Arsenic	41
Cadmium	39
Chromium	3000
Copper	1500
Lead	300
Mercury	17
Molybdenum	18
Nickel	420
Selenium	100
Zinc	2800

(3) Pollutant concentrations.

TABLE 3 OF § 503.13.—POLLUTANT CONCENTRATIONS

Pollutant	Monthly average concentrations (milligrams per kilogram)[1]
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500

TABLE 3 OF § 503.13.—POLLUTANT CONCENTRATIONS—Continued

Pollutant	Monthly average concentrations (milligrams per kilogram)[1]
Lead	300
Mercury	17
Molybdenum	18
Nickel	420
Selenium	36
Zinc	2800

[1] Dry weight basis.

(4) Annual pollutant loading rates.

TABLE 4 OF § 503.13.—ANNUAL POLLUTANT LOADING RATES

Pollutant	Annual pollutant loading rate (kilograms per hectare per 365 day period)
Arsenic	2.0
Cadmium	1.9
Chromium	150
Copper	75
Lead	15
Mercury	0.85
Molybdenum	0.90
Nickel	21
Selenium	5.0
Zinc	140

(c) Domestic septage.

The annual application rate for domestic septage applied to agricultural land, forest, or a reclamation site shall not exceed the annual application rate calculated using equation (1).

$$AAR = \frac{N}{0.0026} \quad \text{Eq. (1)}$$

Where:

AAR=Annual application rate in gallons per acre per 365 day period.

N=Amount of nitrogen in pounds per acre per 365 day period needed by the crop or vegetation grown on the land.

§ 503.14 Management practices.

(a) Bulk sewage sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.

(b) Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters of the United States, as defined in 40 CFR 122.2, except as provided in a permit issued pursuant to section 402 or 404 of the CWA.

(c) Bulk sewage sludge shall not be applied to agricultural land, forest, or a reclamation site that is 10 meters or less from waters of the United States, as defined in 40 CFR 122.2, unless otherwise specified by the permitting authority.

(d) Bulk sewage sludge shall be applied to agricultural land, forest, a public contact site, or a reclamation site at a whole sludge application rate that is equal to or less than the agronomic rate for the bulk sewage sludge, unless, in the case of a reclamation site, otherwise specified by the permitting authority.

(e) Either a label shall be affixed to the bag or other container in which sewage sludge that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sewage sludge sold or given away in an other container for application to the land. The label or information sheet shall contain the following information:

(1) The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.

(2) A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.

(3) The annual whole sludge application rate for the sewage sludge that does not cause any of the annual pollutant loading rates in Table 4 of § 503.13 to be exceeded.

§ 503.15 Operational standards—pathogens and vector attraction reduction.

(a) *Pathogens—sewage sludge.*

(1) The Class A pathogen requirements in § 503.32(a) or the Class B pathogen requirements and site restrictions in § 503.32(b) shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

(2) The Class A pathogen requirements in § 503.32(a) shall be met when bulk sewage sludge is applied to a lawn or a home garden.

(3) The Class A pathogen requirements in § 503.32(a) shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

(b) *Pathogens—domestic septage.*

The requirements in either § 503.32 (c)(1) or (c)(2) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.

(c) *Vector attraction reduction—sewage sludge.*

(1) One of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(10) shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

(2) One of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) shall be met when bulk sewage sludge is applied to a lawn or a home garden.

(3) One of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

(d) *Vector attraction reduction—domestic septage.* The vector attraction reduction requirements in § 503.33(b)(9), (b)(10), or (b)(12) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site.

§ 503.16 Frequency of monitoring.

(a) *Sewage sludge.* (1) The frequency of monitoring for the pollutants listed in Table 1, Table 2, Table 3 and Table 4 of § 503.13; the pathogen density requirements in § 503.32(a) and in § 503.32(b)(2) through (b)(4); and the vector attraction reduction requirements § 503.33 (b)(1) through § 503.33(b)(8) shall be the frequency in Table 1 of § 503.16.

TABLE. 1 OF § 503.16.—FREQUENCY OF MONITORING—LAND APPLICATION

Amount of sewage sludge[1] (metric tons per 365 day period)	Frequency
Greater than zero but less than 290.	Once per year.
Equal to or greater than 290 but less than 1,500.	Once per quarter (four times per year).
Equal to or greater than 1,500 but less than 15,000.	Once per 60 days (six times per year).
Equal to or greater than 15,000.	Once per month (12 times per year).

[1] Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge received by a person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land (dry weight basis).

(2) After the sewage sludge has been monitored for two years at the frequency in Table 1 of § 503.16, the permitting authority may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in § 503.32 (a)(5)(ii) and (a)(5)(iii), but in no case shall the frequency of monitoring be less than once per year when sewage sludge is applied to the land.

(b) *Domestic septage.* If either the pathogen requirements in § 503.32(c)(2) or the vector attraction reduction requirements in § 503.33(b)(12) are met when domestic septage is applied to agricultural land, forest, or a reclamation site, each container of domestic septage applied to the land shall be monitored for compliance with those requirements.

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§ 503.17 Recordkeeping.

(a) *Sewage sludge.* (1) The person who prepares the sewage sludge in § 503.10(b)(1) or (e) shall develop the following information and shall retain the information for five years:

(i) The concentration of each pollutant listed in Table 3 of § 503.13 in the sewage sludge.

(ii) The following certification statement:

"I certify, under penalty of law, that the Class A pathogen requirements in § 503.32(a) and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in § 503.33(b)(1) through § 503.33(b)(8)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(iii) A description of how the Class A pathogen requirements in § 503.32(a) are met.

(iv) A description of how one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) is met.

(2) The person who derives the material in § 503.10 (c)(1) or (f) shall develop the following information and shall retain the information for five years:

(i) The concentration of each pollutant listed in Table 3 of § 503.13 in the material.

(ii) The following certification statement:

"I certify, under penalty of law, that the Class A pathogen requirements in § 503.32(a) and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and the vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(iii) A description of how the Class A pathogen requirements in § 503.32(a) are met.

(iv) A description of how one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) is met.

(3) If the pollutant concentrations in § 503.13(b)(3), the Class A pathogen requirements in § 503.32(a), and the vector attraction reduction requirements in either § 503.33 (b)(9) or (b)(10) are met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site:

(i) The person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years.

(A) The concentration of each pollutant listed in Table 3 of § 503.13 in the bulk sewage sludge.

(B) The following certification statement:

"I certify, under penalty of law, that the pathogen requirements in § 503.32(a) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(C) A description of how the pathogen requirements in § 503.32(a) are met.

(ii) The person who applies the bulk sewage sludge shall develop the following information and shall retain the information for five years.

(A) The following certification statement:

"I certify, under penalty of law, that the management practices in § 503.14 and the vector attraction reduction requirement in [insert either § 503.33 (b)(9) or (b)(10)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

(B) A description of how the management practices in § 503.14 are met for each site on which bulk sewage sludge is applied.

(C) A description of how the vector attraction reduction requirements in either § 503.33(b)(9) or (b)(10) are met for each site on which bulk sewage sludge is applied.

(4) If the pollutant concentrations in § 503.13(b)(3) and the Class B pathogen requirements in § 503.32(b) are met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site:

(i) The person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years:

(A) The concentration of each pollutant listed in Table 3 of § 503.13 in the bulk sewage sludge.

(B) The following certification statement:

"I certify under, penalty of law, that the Class B pathogen requirements in § 503.32(b) and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) if one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements [and vector attraction reduction requirements if applicable] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(C) A description of how the Class B pathogen requirements in § 503.32(b) are met.

(D) When one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) is met, a description of how the vector attraction reduction requirement is met.

(ii) The person who applies the bulk sewage sludge shall develop the following information and shall retain the information for five years.

(A) The following certification statement:

"I certify, under penalty of law, that the management practices in § 503.14, the site restrictions in § 503.32(b)(5), and the vector attraction reduction requirements in [insert either § 503.33 (b)(9) or (b)(10), if one of those requirements is met] have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices and site restrictions [and the vector attraction reduction requirements if applicable] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(B) A description of how the management practices in § 503.14 are met for each site on which bulk sewage sludge is applied.

(C) A description of how the site restrictions in § 503.32(b)(5) are met for each site on which bulk sewage sludge is applied.

(D) When the vector attraction reduction requirement in either § 503.33 (b)(9) or (b)(10) is met, a description of how the vector attraction reduction requirement is met.

(5) If the requirements in § 503.13(a)(2)(i) are met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site:

(i) The person who prepares the bulk sewage sludge shall develop the following information and shall retain the information for five years.

(A) The concentration of each pollutant listed in Table 1 of § 503.13 in the bulk sewage sludge.

(B) The following certification statement:

"I certify, under penalty of law, that the pathogen requirements in [insert either § 503.32(a) or § 503.32(b)] and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) if one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements [and vector attraction reduction requirements] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(C) A description of how the pathogen requirements in either § 503.32 (a) or (b) are met.

(D) When one of the vector attraction requirements in § 503.33 (b)(1) through (b)(8) is met, a description of how the vector attraction requirement is met.

(ii) The person who applies the bulk sewage sludge shall develop the following information, retain the information in § 503.17 (a)(5)(ii)(A) through (a)(5)(ii)(G) indefinitely, and retain the information in § 503.17 (a)(5)(ii)(H) through (a)(5)(ii)(M) for five years.

(A) The location, by either street address or latitude and longitude, of each site on which bulk sewage sludge is applied.

(B) The number of hectares in each site on which bulk sewage sludge is applied.

(C) The date and time bulk sewage sludge is applied to each site.

(D) The cumulative amount of each pollutant (i.e., kilograms) listed in Table 2 of § 503.13 in the bulk sewage sludge applied to each site, including the amount in § 503.12(e)(2)(iii).

(E) The amount of sewage sludge (i.e., metric tons) applied to each site.

(F) The following certification statement:

"I certify, under penalty of law, that the requirements to obtain information in § 503.12(e)(2) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the requirements to obtain information have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

(G) A description of how the requirements to obtain information in § 503.12(e)(2) are met.

(H) The following certification statement:

"I certify, under penalty of law, that the management practices in § 503.14 have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

(I) A description of how the management practices in § 503.14 are met for each site on which bulk sewage sludge is applied.

(J) The following certification statement when the bulk sewage sludge meets the Class B pathogen requirements in § 503.32(b):

"I certify, under penalty of law, that the site restrictions in § 503.32(b)(5) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the site restrictions have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

(K) A description of how the site restrictions in § 503.32(b)(5) are met for each site on which Class B bulk sewage sludge is applied.

(L) The following certification statement when the vector attraction reduction requirement in either § 503.33 (b)(9) or (b)(10) is met:

"I certify, under penalty of law, that the vector attraction reduction requirement in [insert either § 503.33(b)(9) or § 503.33(b)(10)] has been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the vector attraction reduction requirement has been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(M) If the vector attraction reduction requirements in either § 503.33 (b)(9) or (b)(10) are met, a description of how the requirements are met.

(6) If the requirements in § 503.13(a)(4)(ii) are met when sewage sludge is sold or given away in a bag or

other container for application to the land, the person who prepares the sewage sludge that is sold or given away in a bag or other container shall develop the following information and shall retain the information for five years:

(i) The annual whole sludge application rate for the sewage sludge that does not cause the annual pollutant loading rates in Table 4 of § 503.13 to be exceeded.

(ii) The concentration of each pollutant listed in Table 4 of § 503.13 in the sewage sludge.

(iii) The following certification statement:

"I certify, under penalty of law, that the management practice in § 503.14(e), the Class A pathogen requirement in § 503.32(a), and the vector attraction reduction requirement in [insert one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practice, pathogen requirements, and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(iv) A description of how the Class A pathogen requirements in § 503.32(a) are met.

(v) A description of how one of the vector attraction requirements in § 503.33 (b)(1) through (b)(8) is met.

(b) *Domestic septage.* When domestic septage is applied to agricultural land, forest, or a reclamation site, the person who applies the domestic septage shall develop the following information and shall retain the information for five years:

(1) The location, by either street address or latitude and longitude, of each site on which domestic septage is applied.

(2) The number of acres in each site on which domestic septage is applied.

(3) The date and time domestic septage is applied to each site.

(4) The nitrogen requirement for the crop or vegetation grown on each site during a 365 day period.

(5) The rate, in gallons per acre per 365 day period, at which domestic septage is applied to each site.

(6) The following certification statement:

"I certify, under penalty of law, that the pathogen requirements in [insert either § 503.32(c)(1) or § 503.32(c)(2)] and the vector attraction reduction requirements in [insert § 503.33(b)(9), § 503.33(b)(10), or § 503.33(b)(12)] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(7) A description of how the pathogen requirements in either § 503.33 (c)(1) or (c)(2) are met.

(8) A description of how the vector attraction reduction requirements in § 503.33 (b)(9), (b)(10), or (b)(12) are met.

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§ 503.18 Reporting.

(a) Class I sludge management facilities, POTWs (as defined in 40 CFR 501.2) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more shall submit the following information to the permitting authority:

(1) The information in § 503.17(a), except the information in § 503.17 (a)(3)(ii), (a)(4)(ii) and in (a)(5)(ii), for the appropriate requirements on February 19 of each year.

(2) The information in § 503.17 (a)(5)(ii)(A) through (a)(5)(ii)(G) on [insert the month and day from the date of publication of this rule] of each year when 90 percent or more of any of the cumulative pollutant loading rates in Table 2 of § 503.13 is reached at a site.

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Subpart C—Surface Disposal

§ 503.20 Applicability.

(a) This subpart applies to any person who prepares sewage sludge that is placed on a surface disposal site, to the owner/operator of a surface disposal site, to sewage sludge placed on a surface disposal site, and to a surface disposal site.

(b) This subpart does not apply to sewage sludge stored on the land or to the land on which sewage sludge is stored. It also does not apply to sewage sludge that remains on the land for longer than two years when the person who prepares the sewage sludge demonstrates that the land on which the sewage sludge remains is not an active sewage sludge unit. The demonstration shall include the following information, which shall be retained by the person who prepares the sewage sludge for the period that the sewage sludge remains on the land:

(1) The name and address of the person who prepares the sewage sludge.

(2) The name and address of the person who either owns the land or leases the land.

(3) The location, by either street address or latitude and longitude, of the land.

(4) An explanation of why sewage sludge needs to remain on the land for longer than two years prior to final use or disposal.

(5) The approximate time period when the sewage sludge will be used or disposed.

(c) This subpart does not apply to sewage sludge treated on the land or to the land on which sewage sludge is treated.

§ 503.21 Special definitions.

(a) *Active sewage sludge unit* is a sewage sludge unit that has not closed.

(b) *Aquifer* is a geologic formation, group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs.

(c) *Contaminate an aquifer* means to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR 141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contaminant level for nitrate in 40 CFR 141.11.

(d) *Cover* is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

(e) *Displacement* is the relative movement of any two sides of a fault measured in any direction.

(f) *Fault* is a fracture or zone of fractures in any materials along which strata on one side are displaced with respect to strata on the other side.

(g) *Final cover* is the last layer of soil or other material placed on a sewage sludge unit at closure.

(h) *Holocene time* is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

(i) *Leachate collection system* is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

(j) *Liner* is soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

(k) *Lower explosive limit for methane gas* is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

(l) *Qualified ground-water scientist* is an individual with a baccalaureate or

post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground-water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgments regarding ground-water monitoring, pollutant fate and transport, and corrective action.

(m) *Seismic impact zone* is an area that has a 10 percent or greater probability that the horizontal ground level acceleration of the rock in the area exceeds 0.10 gravity once in 250 years.

(n) *Sewage sludge unit* is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR 122.2.

(o) *Sewage sludge unit boundary* is the outermost perimeter of an active sewage sludge unit.

(p) *Surface disposal site* is an area of land that contains one or more active sewage sludge units.

(q) *Unstable area* is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

§ 503.22 General requirements.

(a) No person shall place sewage sludge on an active sewage sludge unit unless the requirements in this subpart are met.

(b) An active sewage sludge unit located within 60 meters of a fault that has displacement in Holocene time; located in an unstable area; or located in a wetland, except as provided in a permit issued pursuant to section 402 of the CWA, shall close by [insert date one year after the effective date of this Final rule], unless, in the case of an active sewage sludge unit located within 60 meters of a fault that has displacement in Holocene time, otherwise specified by the permitting authority.

(c) The owner/operator of an active sewage sludge unit shall submit a written closure and post closure plan to the permitting authority 180 days prior to the date that the active sewage sludge unit closes. The plan shall describe how the sewage sludge unit will be closed and, at a minimum, shall include:

(1) A discussion of how the leachate collection system will be operated and maintained for three years after the sewage sludge unit closes if the sewage sludge unit has a liner and leachate collection system.

(2) A description of the system used to monitor for methane gas in the air in any structures within the surface disposal site and in the air at the property line of the surface disposal site, as required in § 503.24(j)(2).

(3) A discussion of how public access to the surface disposal site will be restricted for three years after the last sewage sludge unit in the surface disposal site closes.

(d) The owner of a surface disposal site shall provide written notification to the subsequent owner of the site that sewage sludge was placed on the land.

§ 503.23 Pollutant limits (other than domestic septage).

(a) Active sewage sludge unit without a liner and leachate collection system.

(1) Except as provided in § 503.23 (a)(2) and (b), the concentration of each pollutant listed in Table 1 of § 503.23 in sewage sludge placed on an active sewage sludge unit shall not exceed the concentration for the pollutant in Table 1 of § 503.23.

TABLE 1 OF § 503.23.—POLLUTANT CONCENTRATIONS—ACTIVE SEWAGE SLUDGE UNIT WITHOUT A LINER AND LEACHATE COLLECTION

Pollutant	Concentration (milligrams per kilograms [1])
Arsenic	73
Chromium	600
Nickel	420

[1] Dry weight basis.

(2) Except as provided in § 503.23(b), the concentration of each pollutant listed in Table 1 of § 503.23 in sewage sludge placed on an active sewage sludge unit whose boundary is less than 150 meters from the property line of the surface disposal site shall not exceed the concentration determined using the following procedure.

(i) The actual distance from the active sewage sludge unit boundary to the property line of the surface disposal site shall be determined.

(ii) The concentration of each pollutant listed in Table 2 of § 503.23 in the sewage sludge shall not exceed the concentration in Table 2 of § 503.23 that corresponds to the actual distance in § 503.23(a)(2)(i).

TABLE 2 OF § 503.23.—POLLUTANT CONCENTRATIONS—ACTIVE SEWAGE SLUDGE UNIT WITHOUT A LINER AND LEACHATE COLLECTION SYSTEM THAT HAS A UNIT BOUNDARY TO PROPERTY LINE DISTANCE LESS THAN 150 METERS

Unit boundary to property line	Pollutant concentration [1]		
Distance (meters)	Arsenic (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)
0 to less than 25	30	200	210
25 to less than 50	34	220	240
50 to less than 75	39	260	270
75 to less than 100	46	300	320
100 to less than 125	53	360	390
125 to less than 150	62	450	420

[1] Dry weight basis.

(b) Active sewage sludge unit without a liner and leachate collection system—site-specific limits.

(1) At the time of permit application, the owner/operator of a surface disposal site may request site-specific pollutant limits in accordance with § 503.23(b)(2) for an active sewage sludge unit without a liner and leachate collection system when the existing values for site parameters specified by the permitting authority are different from the values for those parameters used to develop the pollutant limits in Table 1 of § 503.23 and when the permitting authority determines that site-specific pollutant limits are appropriate for the active sewage sludge unit.

(2) The concentration of each pollutant listed in Table 1 of § 503.23 in sewage sludge placed on an active sewage sludge unit without a liner and leachate collection system shall not exceed either the concentration for the pollutant determined during a site-specific assessment, as specified by the permitting authority, or the existing concentration of the pollutant in the sewage sludge, whichever is lower.

§ 503.24 Management practices.

(a) Sewage sludge shall not be placed on an active sewage sludge unit if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.

(b) An active sewage sludge unit shall not restrict the flow of a base flood.

(c) When a surface disposal site is located in a seismic impact zone, an active sewage sludge unit shall be designed to withstand the maximum recorded horizontal ground level acceleration.

(d) An active sewage sludge unit shall be located 60 meters or more from a fault that has displacement in Holocene

time, unless otherwise specified by the permitting authority.

(e) An active sewage sludge unit shall not be located in an unstable area.

(f) An active sewage sludge unit shall not be located in a wetland, except as provided in a permit issued pursuant to section 402 or 404 of the CWA.

(g)(1) Run-off from an active sewage sludge unit shall be collected and shall be disposed in accordance with National Pollutant Discharge Elimination System permit requirements and any other applicable requirements.

(2) The run-off collection system for an active sewage sludge unit shall have the capacity to handle run-off from a 24-hour, 25-year storm event.

(h) The leachate collection system for an active sewage sludge unit that has a liner and leachate collection system shall be operated and maintained during the period the sewage sludge unit is active and for three years after the sewage sludge unit closes.

(i) Leachate from an active sewage sludge unit that has a liner and leachate collection system shall be collected and shall be disposed in accordance with the applicable requirements during the period the sewage sludge unit is active and for three years after the sewage sludge unit closes.

(j)(1) When a cover is placed on an active sewage sludge unit, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit for methane gas during the period that the sewage sludge unit is active and the concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas during the period that the sewage sludge unit is active.

(2) When a final cover is placed on a sewage sludge unit at closure, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit for methane gas for three years after the sewage sludge unit closes and the concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas for three years after the sewage sludge unit closes, unless otherwise specified by the permitting authority.

(k) A food crop, a feed crop, or a fiber crop shall not be grown on an active sewage sludge unit, unless the owner/operator of the surface disposal site demonstrates to the permitting authority that through management practices public health and the environment are protected from any reasonably anticipated adverse effects of pollutants in sewage sludge when crops are grown.

(l) Animals shall not be grazed on an active sewage sludge unit, unless the owner/operator of the surface disposal site demonstrates to the permitting authority that through management practices public health and the environment are protected from any reasonably anticipated adverse effects of pollutants in sewage sludge when animals are grazed.

(m) Public access to a surface disposal site shall be restricted for the period that the surface disposal site contains an active sewage sludge unit and for three years after the last active sewage sludge unit in the surface disposal site closes.

(n)(1) Sewage sludge placed on an active sewage sludge unit shall not contaminate an aquifer.

(2) Results of a ground-water monitoring program developed by a qualified ground-water scientist or a certification by a qualified ground-water scientist shall be used to demonstrate that sewage sludge placed on an active sewage sludge unit does not contaminate an aquifer.

§ 503.25 Operational standards—pathogens and vector attraction reduction.

(a) *Pathogens—sewage sludge (other than domestic septage).* The Class A pathogens requirements in § 503.32(a) or one of the Class B pathogen requirements in § 503.32 (b)(2) through (b)(4) shall be met when sewage sludge is placed on an active sewage sludge unit, unless the vector attraction reduction requirement in § 503.33(b)(11) is met.

(b) *Vector attraction reduction—sewage sludge (other than domestic septage).* One of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(11) shall be met when sewage sludge is placed on an active sewage sludge unit.

(c) *Vector attraction reduction—domestic septage.* One of the vector attraction reduction requirement in § 503.33 (b)(9) through (b)(12) shall be met when domestic septage is placed on an active sewage sludge unit.

§ 503.26 Frequency of monitoring.

(a) *Sewage sludge (other than domestic septage).*

(1) The frequency of monitoring for the pollutants in Tables 1 and 2 of § 503.23; the pathogen density requirements in § 503.32(a) and in § 503.32 (b)(2) through (b)(4); and the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) for sewage sludge placed on an active sewage sludge unit shall be the frequency in Table 1 of § 503.26.

TABLE 1 OF § 503.26.—FREQUENCY OF MONITORING—SURFACE DISPOSAL

Amount of sewage sludge[1] (metric tons per 365 day period)	Frequency
Greater than zero but less than 290.	Once per year.
Equal to or greater than 290 but less than 1,500.	Once per quarter (four times per year).
Equal to or greater than 1,500 but less than 15,000.	Once per 60 days (six times per year).
Equal to or greater than 15,000.	Once per month (12 times per year).

[1] Amount of sewage sludge placed on an active sewage sludge unit (dry weight basis).

(2) After the sewage sludge has been monitored for two years at the frequency in Table 1 of § 503.26, the permitting authority may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements in § 503.32 (a)(5)(ii) and (a)(5)(iii), but in no case shall the frequency of monitoring be less than once per year when sewage sludge is placed on an active sewage sludge unit.

(b) *Domestic septage.* If the vector attraction reduction requirements in § 503.33(b)(12) are met when domestic septage is placed on an active sewage sludge unit, each container of domestic septage shall be monitored for compliance with those requirements.

(c) *Air.* Air in structures within a surface disposal site and at the property line of the surface disposal site shall be monitored continuously for methane gas during the period that the surface disposal site contains an active sewage sludge unit on which the sewage sludge is covered and for three years after a sewage sludge unit closes when a final cover is placed on the sewage sludge.

(Approved by the Office of Management and Budget under control number 2040–0157)

§ 503.27 Recordkeeping.

(a) When sewage sludge (other than domestic septage) is placed on an active sewage sludge unit:

(1) The person who prepares the sewage sludge shall develop the following information and shall retain the information for five years.

(i) The concentration of each pollutant listed in Table 1 of § 503.23 in the sewage sludge when the pollutant concentrations in Table 1 of § 503.23 are met.

(ii) The following certification statement:

"I certify, under penalty of law, that the pathogen requirements in [insert § 503.32(a), § 503.32(b)(2), § 503.32(b)(3), or § 503.32(b)(4) when one of those requirements is met] and the vector attraction reduction requirements in [insert one of the vector attraction

reduction requirements in § 503.33(b)(1) through § 503.33(b)(8) when one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine the [pathogen requirements and vector attraction reduction requirements if appropriate] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(iii) A description of how the pathogen requirements in § 503.32 (a), (b)(2), (b)(3), or (b)(4) are met when one of those requirements is met.

(iv) A description of how one of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) is met when one of those requirements is met.

(2) The owner/operator of the surface disposal site, shall develop the following information and shall retain that information for five years.

(i) The concentration of each pollutant listed in Table 2 of § 503.23 in the sewage sludge when the pollutant concentrations in Table 2 of § 503.23 are met or when site-specific pollutant limits in § 503.23(b) are met.

(ii) The following certification statement:

"I certify, under penalty of law, that the management practices in § 503.24 and the vector attraction reduction requirement in [insert one of the requirements in § 503.33 (b)(9) through (b)(11) if one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices [and the vector attraction reduction requirements if appropriate] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(iii) A description of how the management practices in § 503.24 are met.

(iv) A description of how the vector attraction reduction requirements in § 503.33 (b)(9) through (b)(11) are met if one of those requirements is met.

(b) When domestic septage is placed on a surface disposal site:

(1) If the vector attraction reduction requirements in § 503.33(b)(12) are met, the person who places the domestic septage on the surface disposal site shall develop the following information and shall retain the information for five years:

(i) The following certification statement:

"I certify, under penalty of law, that the vector attraction reduction requirements in § 503.33(b)(12) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the vector attraction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

(ii) A description of how the vector attraction reduction requirements in § 503.33(b)(12) are met.

(2) The owner/operator of the surface disposal site shall develop the following information and shall retain that information for five years:

(i) The following certification statement:

"I certify, under penalty of law, that the management practices in § 503.24 and the vector attraction reduction requirements in [insert § 503.33(b)(9) through § 503.33(b)(11) when one of those requirements is met] have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices [and the vector attraction reduction requirements if appropriate] have been met. I am aware that there are significant penalties for false certification including the possibility of fine or imprisonment."

(ii) A description of how the management practices in § 503.24 are met.

(iii) A description how the vector attraction reduction requirements in § 503.33(b)(9) through § 503.33(b)(11) are met if one of those requirements is met.

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§ 503.28 Reporting.

Class I sludge management facilities, POTWs (as defined in 40 CFR 501.2) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more shall submit the information in § 503.27(a) to the permitting authority on February 19 of each year.

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Subpart D—Pathogens and Vector Attraction Reduction

§ 503.30 Scope.

(a) This subpart contains the requirements for a sewage sludge to be classified either Class A or Class B with respect to pathogens.

(b) This subpart contains the site restrictions for land on which a Class B sewage sludge is applied.

(c) This subpart contains the pathogen requirements for domestic septage applied to agricultural land, forest, or a reclamation site.

(d) This subpart contains alternative vector attraction reduction requirements for sewage sludge that is applied to the land or placed on a surface disposal site.

§ 503.31 Special definitions.

(a) *Aerobic digestion* is the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

(b) *Anaerobic digestion* is the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

(c) *Density of microorganisms* is the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

(d) *Land with a high potential for public exposure* is land that the public uses frequently. This includes, but is not limited to, a public contact site and a reclamation site located in a populated area (e.g, a construction site located in a city).

(e) *Land with a low potential for public exposure* is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest, and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

(f) *Pathogenic organisms* are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

(g) *pH* means the logarithm of the reciprocal of the hydrogen ion concentration.

(h) *Specific oxygen uptake rate (SOUR)* is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in the sewage sludge.

(i) *Total solids* are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

(j) *Unstabilized solids* are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

(k) *Vector attraction* is the characteristic of sewage sludge that attracts rodents, flies, mosquitos, or other organisms capable of transporting infectious agents.

(l) *Volatile solids* is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degrees Celsius in the presence of excess air.

§ 503.32 Pathogens.

(a) *Sewage sludge—Class A.* (1) The requirement in § 503.32(a)(2) and the requirements in either § 503.32(a)(3), (a)(4), (a)(5), (a)(6), (a)(7), or (a)(8) shall be met for a sewage sludge to be classified Class A with respect to pathogens.

(2) The Class A pathogen requirements in § 503.32 (a)(3) through (a)(8) shall be met either prior to meeting or at the same time the vector attraction reduction requirements in § 503.33, except the vector attraction reduction requirements in § 503.33 (b)(6) through (b)(8), are met.

(3) *Class A—Alternative 1.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f).

(ii) The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time.

(A) When the percent solids of the sewage sludge is seven percent or higher, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 20 minutes or longer; and the temperature and time period shall be determined using equation (2), except when small particles of sewage sludge are heated by either warmed gases or an immiscible liquid.

$$D = \frac{131{,}700{,}000}{10^{0.1400t}} \quad \text{Eq. (2)}$$

Where,
D=time in days.
t=temperature in degrees Celsius.

(B) When the percent solids of the sewage sludge is seven percent or higher and small particles of sewage sludge are heated by either warmed gases or an immiscible liquid, the temperature of the sewage sludge shall be 50 degrees Celsius or higher; the time period shall be 15 seconds or longer; and the temperature and time period shall be determined using equation (2).

(C) When the percent solids of the sewage sludge is less than seven percent and the time period is at least 15 seconds, but less than 30 minutes, the temperature and time period shall be determined using equation (2).

(D) When the percent solids of the sewage sludge is less than seven percent; the temperature of the sewage sludge is 50 degrees Celsius or higher; and the time period is 30 minutes or longer, the temperature and time period shall be determined using equation (3).

$$D = \frac{50{,}070{,}000}{10^{0.1400t}} \quad \text{Eq. (3)}$$

Where,
D=time in days.
t=temperature in degrees Celsius.

(4) *Class A—Alternative 2.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f).

(ii) (A) The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

(B) The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

(C) At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

(5) *Class A—Alternative 3.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f).

(ii) (A) The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains enteric viruses.

(B) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses until the next monitoring episode for the sewage sludge.

(C) When the density of enteric viruses in the sewage sludge prior to pathogen treatment is equal to or greater than one Plaque-forming Unit per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to enteric viruses when the density of enteric viruses in the sewage sludge after pathogen treatment is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the enteric virus density requirement are documented.

(D) After the enteric virus reduction in paragraph (a)(5)(ii)(C) of this section is demonstrated for the pathogen treatment process, the sewage sludge continues to be Class A with respect to enteric viruses when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in paragraph (a)(5)(ii)(C) of this section.

(iii)(A) The sewage sludge shall be analyzed prior to pathogen treatment to determine whether the sewage sludge contains viable helminth ova.

(B) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is less than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova until the next monitoring episode for the sewage sludge.

(C) When the density of viable helminth ova in the sewage sludge prior to pathogen treatment is equal to or greater than one per four grams of total solids (dry weight basis), the sewage sludge is Class A with respect to viable helminth ova when the density of viable helminth ova in the sewage sludge after pathogen treatment is less than one per four grams of total solids (dry weight basis) and when the values or ranges of values for the operating parameters for the pathogen treatment process that produces the sewage sludge that meets the viable helminth ova density requirement are documented.

(D) After the viable helminth ova reduction in paragraph (a)(5)(iii)(C) of this section is demonstrated for the pathogen treatment process, the sewage

sludge continues to be Class A with respect to viable helminth ova when the values for the pathogen treatment process operating parameters are consistent with the values or ranges of values documented in paragraph (a)(5)(iii)(C) of this section.

(6) *Class A—Alternative 4.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f).

(ii) The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f), unless otherwise specified by the permitting authority.

(iii) The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10 (b), (c), (e), or (f), unless otherwise specified by the permitting authority.

(7) *Class A—Alternative 5.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella*, sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10(b), (c), (e), or (f).

(ii) Sewage sludge that is used or disposed shall be treated in one of the Processes to Further Reduce Pathogens described in appendix B of this part.

(8) *Class A—Alternative 6.* (i) Either the density of fecal coliform in the sewage sludge shall be less than 1000 Most Probable Number per gram of total solids (dry weight basis), or the density of *Salmonella*, sp. bacteria in the sewage sludge shall be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in § 503.10(b), (c), (e), or (f).

(ii) Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Further Reduce Pathogens, as determined by the permitting authority.

(b) *Sewage sludge—Class B.* (1)(i) The requirements in either § 503.32(b)(2), (b)(3), or (b)(4) shall be met for a sewage sludge to be classified Class B with respect to pathogens.

(ii) The site restrictions in § 503.32(b)(5) shall be met when sewage sludge that meets the Class B pathogen requirements in § 503.32(b)(2), (b)(3), or (b)(4) is applied to the land.

(2) *Class B—Alternative 1.*

(i) Seven samples of the sewage sludge shall be collected at the time the sewage sludge is used or disposed.

(ii) The geometric mean of the density of fecal coliform in the samples collected in paragraph (b)(2)(i) of this section shall be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

(3) *Class B—Alternative 2.* Sewage sludge that is used or disposed shall be treated in one of the Processes to Significantly Reduce Pathogens described in appendix B of this part.

(4) *Class B—Alternative 3.* Sewage sludge that is used or disposed shall be treated in a process that is equivalent to a Process to Significantly Reduce Pathogens, as determined by the permitting authority.

(5) *Site Restrictions.* (i) Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

(ii) Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil.

(iii) Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil.

(iv) Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

(v) Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

(vi) Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

(vii) Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge.

(viii) Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

(c) *Domestic septage.* (1) The site restrictions in § 503.32(b)(5) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site; or

(2) The pH of domestic septage applied to agricultural land, forest, or a reclamation site shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes and the site restrictions in § 503.32 (b)(5)(i) through (b)(5)(iv) shall be met.

§ 503.33 Vector attraction reduction.

(a)(1) One of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(10) shall be met when bulk sewage sludge is applied to agricultural land, forest, a public contact site, or a reclamation site.

(2) One of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) shall be met when bulk sewage sludge is applied to a lawn or a home garden.

(3) One of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(8) shall be met when sewage sludge is sold or given away in a bag or other container for application to the land.

(4) One of the vector attraction reduction requirements in § 503.33 (b)(1) through (b)(11) shall be met when sewage sludge (other than domestic

septage) is placed on an active sewage sludge unit.

(5) One of the vector attraction reduction requirements in § 503.33 (b)(9), (b)(10), or (b)(12) shall be met when domestic septage is applied to agricultural land, forest, or a reclamation site and one of the vector attraction reduction requirements in § 503.33 (b)(9) through (b)(12) shall be met when domestic septage is placed on an active sewage sludge unit.

(b)(1) The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent (see calculation procedures in "Environmental Regulations and Technology—Control of Pathogens and Vector Attraction in Sewage Sludge", EPA–625/R–92/013, 1992, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268).

(2) When the 38 percent volatile solids reduction requirement in § 503.33(b)(1) cannot be met for an anaerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. When at the end of the 40 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 17 percent, vector attraction reduction is achieved.

(3) When the 38 percent volatile solids reduction requirement in § 503.33(b)(1) cannot be met for an aerobically digested sewage sludge, vector attraction reduction can be demonstrated by digesting a portion of the previously digested sewage sludge that has a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. When at the end of the 30 days, the volatile solids in the sewage sludge at the beginning of that period is reduced by less than 15 percent, vector attraction reduction is achieved.

(4) The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

(5) Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

(6) The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

(7) The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials.

(8) The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials.

(9)(i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When the sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(10)(i) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

(11) Sewage sludge placed on an active sewage sludge unit shall be covered with soil or other material at the end of each operating day.

(12) The pH of domestic septage shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for 30 minutes.

Subpart E—Incineration

§ 503.40 Applicability.

(a) This subpart applies to a person who fires sewage sludge in a sewage sludge incinerator, to a sewage sludge incinerator, and to sewage sludge fired in a sewage sludge incinerator.

(b) This subpart applies to the exit gas from a sewage sludge incinerator stack.

§ 503.41 Special definitions.

(a) *Air pollution control device* is one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

(b) *Auxiliary fuel* is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

(c) *Control efficiency* is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

(d) *Dispersion factor* is the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

(e) *Fluidized bed incinerator* is an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

(f) *Hourly average* is the arithmetic mean of all measurements, taken during an hour. At least two measurements must be taken during the hour.

(g) *Incineration* is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

(h) *Monthly average* is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

(i) *Risk specific concentration* is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of the site where the sewage sludge incinerator is located.

(j) *Sewage sludge feed rate* is either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

(k) *Sewage sludge incinerator* is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

(l) *Stack height* is the difference between the elevation of the top of a sewage sludge incinerator stack and the

elevation of the ground at the base of the stack when the difference is equal to or less than 65 meters. When the difference is greater than 65 meters, stack height is the creditable stack height determined in accordance with 40 CFR 51.100 (ii).

(m) *Total hydrocarbons* means the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

(n) *Wet electrostatic precipitator* is an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

(o) *Wet scrubber* is an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

§ 503.42 General requirements.

No person shall fire sewage sludge in a sewage sludge incinerator except in compliance with the requirements in this subpart.

§ 503.43 Pollutant limits.

(a) Firing of sewage sludge in a sewage sludge incinerator shall not violate the requirements in the National Emission Standard for Beryllium in subpart C of 40 CFR part 61.

(b) Firing of sewage sludge in a sewage sludge incinerator shall not violate the requirements in the National Emission Standard for Mercury in subpart E of 40 CFR part 61.

(c) *Pollutant limit—lead.*

(1) The daily concentration of lead in sewage sludge fed to a sewage sludge incinerator shall not exceed the concentration calculated using Equation (4).

$$C = \frac{0.1 \times NAAQS \times 86{,}400}{DF \times (1 - CE) \times SF} \quad \text{Eq. (4)}$$

Where:

C=Daily concentration of lead in sewage sludge in milligrams per kilogram of total solids (dry weight basis).

NAAQS=National Ambient Air Quality Standard for lead in micrograms per cubic meter.

DF=Dispersion factor in micrograms per cubic meter per gram per second.

CE=Sewage sludge incinerator control efficiency for lead in hundredths.

SF=Sewage sludge feed rate in metric tons per day (dry weight basis).

(2)(i) When the sewage sludge stack height is 65 meters or less, the actual sewage sludge incinerator stack height shall be used in an air dispersion model specified by the permitting authority to determine the dispersion factor (DF) in equation (4).

(ii) When the sewage sludge incinerator stack height exceeds 65 meters, the creditable stack height shall be determined in accordance with 40 CFR 51.100(ii) and the creditable stack height shall be used in an air dispersion model specified by the permitting authority to determine the dispersion factor (DF) in equation (4).

(3) The control efficiency (CE) in equation (5) shall be determined from a performance test of the sewage sludge incinerator, as specified by the permitting authority.

(d) Pollutant limit—arsenic, cadmium, chromium, and nickel.

(1) The daily concentration for arsenic, cadmium, chromium, and nickel in sewage sludge fed to a sewage sludge incinerator each shall not exceed the concentration calculated using equation (5).

$$C = \frac{RSC \times 86{,}400}{DF \times (1 - CE) \times SF} \quad \text{Eq. (5)}$$

Where:

C=Daily concentration of arsenic, cadmium, chromium, or nickel in sewage sludge in milligrams per kilogram of total solids (dry weight basis).

CE=Sewage sludge incinerator control efficiency for arsenic, cadmium, chromium, or nickel in hundredths.

DF=Dispersion factor in micrograms per cubic meter per gram per second.

RSC=Risk specific concentration in micrograms per cubic meter. S

F=Sewage sludge feed rate in met,ric tons per day (dry weight basis).

(2) The risk specific concentrations for arsenic, cadmium, and nickel used in equation (6) shall be obtained from Table 1 of § 503 .43.

TABLE 1 OF § 503.43.—RISK SPECIFIC CONCENTRATION ARSENIC, CADMIUM, AND NICKEL

Pollutant	Risk specific concentration (micrograms per cubic meter)
Arsenic	0.023
Cadmium	0.057
Nickel	2.0

(3) The risk specific concentration for chromium used in equation (5) shall be obtained from Table 2 of § 503.43 or shall be calculated using equation (6), as specified by the permitting authority.

TABLE 2 OF § 503.43.—RISK SPECIFIC CONCENTRATION—CHROMIUM

Type of incinerator	Risk specific concentration (micrograms per cubic meter)
Fluidized bed with wet scrubber	0.86
Fluidized bed with wet scrubber and wet electrostatic precipitator	0.23
Other types with wet scrubber	0.064
Other types with wet scrubber and wet electrostatic precipitator	0.018

$$RSC = \frac{0.0085}{r} \quad \text{Eq. (6)}$$

Where:

RSC=risk specific concentration for chromium in micrograms per cubic meter used in equation (5).

r=decimal fraction of the hexavalent chromium concentration in the total chromium concentration measured in the exit gas from the sewage sludge incinerator stack in hundredths.

(4)(i) When the sewage sludge incinerator stack height is equal to or less than 65 meters, the actual sewage sludge incinerator stack height shall be used in an air dispersion model, as specified by the permitting authority, to determine the dispersion factor (DF) in equation (5).

(ii) When the sewage sludge incinerator stack height is greater than 65 meters, the creditable stack height shall be determined in accordance with 40 CFR 51.100(ii) and the creditable stack height shall be used in an air dispersion model, as specified by the permitting authority, to determine the dispersion factor (DF) in equation (5).

(5) The control efficiency (CE) in equation (5) shall be determined from a performance test of the sewage sludge incinerator, as specified by the permitting authority.

§ 503.44 Operational standard—total hydrocarbons.

(a) The total hydrocarbons concentration in the exit gas from a sewage sludge incinerator shall be corrected for zero percent moisture by multiplying the measured total hydrocarbons concentration by the correction factor calculated using equation (7).

$$\text{Correction factor (percent moisture)} = \frac{1}{(1 - X)} \quad \text{Eq. (7)}$$

Where:

X=decimal fraction of the percent moisture in the sewage sludge incinerator exit gas in hundredths.

(b) The total hydrocarbons concentration in the exit gas from a sewage sludge incinerator shall be corrected to seven percent oxygen by multiplying the measured total hydrocarbons concentration by the correction factor calculated using equation (8).

$$\text{Correction factor (oxygen)} = \frac{14}{(21-Y)} \quad \text{Eq. (8)}$$

Where:

Y=Percent oxygen concentration in the sewage sludge incinerator stack exit gas (dry volume/dry volume).

(c) The monthly average concentration for total hydrocarbons in the exit gas from a sewage sludge incinerator stack, corrected for zero percent moisture using the correction factor from equation (7) and to seven percent oxygen using the correction factor from equation (8), shall not exceed 100 parts per million on a volumetric basis when measured using the instrument required by § 503.45(a).

§ 503.45 Management practices.

(a)(1) An instrument that measures and records the total hydrocarbons concentration in the sewage sludge incinerator stack exit gas continuously shall be installed, calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority.

(2) The total hydrocarbons instrument shall employ a flame ionization detector; shall have a heated sampling line maintained at a temperature of 150 degrees Celsius or higher at all times; and shall be calibrated at least once every 24-hour operating period using propane.

(b) An instrument that measures and records the oxygen concentration in the sewage sludge incinerator stack exit gas continuously shall be installed, calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority.

(c) An instrument that measures and records information used to determine the moisture content in the sewage sludge incinerator stack exit gas continuously shall be installed, calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority.

(d) An instrument that measures and records combustion temperatures continuously shall be installed, calibrated, operated, and maintained for each sewage sludge incinerator, as specified by the permitting authority.

(e) The maximum combustion temperature for a sewage sludge incinerator shall be specified by the permitting authority and shall be based on information obtained during the performance test of the sewage sludge incinerator to determine pollutant control efficiencies.

(f) The values for the operating parameters for the sewage sludge incinerator air pollution control device shall be specified by the permitting authority and shall be based on information obtained during the performance test of the sewage sludge incinerator to determine pollutant control efficiencies.

(g) Sewage sludge shall not be fired in a sewage sludge incinerator if it is likely to adversely affect a threatened or endangered species listed under section 4 of the Endangered Species Act or its designated critical habitat.

§ 503.46 Frequency of monitoring.

(a) *Sewage sludge.*

(1) The frequency of monitoring for beryllium and mercury shall be specified by the permitting authority.

(2) The frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel in sewage sludge fed to a sewage sludge incinerator shall be the frequency in Table 1 of § 503.46.

TABLE 1 OF § 503.46.—FREQUENCY OF MONITORING—INCINERATION

Amount of sewage sludge[1] (metric tons per 365 day period)	Frequency
Greater than zero but less than 290.	Once per year.
Equal to or greater than 290 but less than 1,500.	Once per quarter (four times per year).
Equal to or greater than 1,500 but less than 15,000.	Once per 60 days (six times per year).
Equal to or greater than 15,000	Once per month (12 times per year).

[1] Amount of sewage sludge fired in a sewage sludge incinerator (dry weight basis).

(3) After the sewage sludge has been monitored for two years at the frequency in Table 1 of § 503.46, the permitting authority may reduce the frequency of monitoring for arsenic, cadmium, chromium, lead, and nickel, but in no case shall the frequency of monitoring be less than once per year when sewage sludge is fired in a sewage sludge incinerator.

(b) Total hydrocarbons, oxygen concentration, information to determine moisture content, and combustion temperatures.

The total hydrocarbons concentration and oxygen concentration in the exit gas from a sewage sludge incinerator stack, the information used to measure moisture content in the exit gas, and the combustion temperatures for the sewage sludge incinerator shall be monitored continuously.

(c) Air pollution control device operating parameters.

The frequency of monitoring for the sewage sludge incinerator air pollution control device operating parameters shall be specified by the permitting authority.

(Approved by the Office of Management and Budget under control number 2040–0157)

§ 503.47 Recordkeeping.

(a) The person who fires sewage sludge in a sewage sludge incinerator shall develop the information in § 503.47(b) through § 503.47(n) and shall retain that information for five years.

(b) The concentration of lead, arsenic, cadmium, chromium, and nickel in the sewage sludge fed to the sewage sludge incinerator.

(c) The total hydrocarbons concentrations in the exit gas from the sewage sludge incinerator stack.

(d) Information that indicates the requirements in the National Emission Standard for beryllium in subpart C of 40 CFR part 61 are met.

(e) Information that indicates the requirements in the National Emission Standard for mercury in subpart E of 40 CFR part 61 are met.

(f) The combustion temperatures, including the maximum combustion temperature, for the sewage sludge incinerator.

(g) Values for the air pollution control device operating parameters.

(h) The oxygen concentration and information used to measure moisture content in the exit gas from the sewage sludge incinerator stack.

(i) The sewage sludge feed rate.

(j) The stack height for the sewage sludge incinerator.

(k) The dispersion factor for the site where the sewage sludge incinerator is located.

(l) The control efficiency for lead, arsenic, cadmium, chromium, and nickel for each sewage sludge incinerator.

(m) The risk specific concentration for chromium calculated using equation (6), if applicable.

(n) A calibration and maintenance log for the instruments used to measure the total hydrocarbons concentration and oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures

(Approved by the Office of Management and Budget under control number 2040–0157)

§ 503.48 Reporting.

Class I sludge management facilities, POTWs (as defined in 40 CFR 501.2) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve a population of 10,000 people or greater shall submit the information in § 503.47(b) through § 503.47(h) to the permitting authority on February 19 of each year.

(Approved by the Office of Management and Budget under control number 2040–0157)

Appendix A to Part 503—Procedure to Determine the Annual Whole Sludge Application Rate for a Sewage Sludge

Section 503.13(a)(4)(ii) requires that the product of the concentration for each pollutant listed in Table 4 of § 503.13 in sewage sludge sold or given away in a bag or other container for application to the land and the annual whole sludge application rate (AWSAR) for the sewage sludge not cause the annual pollutant loading rate for the pollutant in Table 4 of § 503.13 to be exceeded. This appendix contains the procedure used to determine the AWSAR for a sewage sludge that does not cause the annual pollutant loading rates in Table 4 of § 503.13 to be exceeded.

The relationship between the annual pollutant loading rate (APLR) for a pollutant and the annual whole sludge application rate (AWSAR) for 1a sewage sludge is shown in equation (1).

$$APLR = C \times AWSAR \times 0.001 \quad (1)$$

Where:

APLR=Annual pollutant loading rate in kilograms per hectare per 365 day period.

C=Pollutant concentration in milligrams, per kilogram of total solids (dry weight basis).

AWSAR=Annual whole sludge application rate in metric tons per hectare per 365 day period (dry weight basis).

0.001=A conversion factor.

To determine the AWSAR, equation (1) is rearranged into equation (2):

$$AWSAR = \frac{APLR}{C \times 0.001} \quad (2)$$

The procedure used to determine the AWSAR for a sewage sludge is presented below.

Procedure:

1. Analyze a sample of the sewage sludge to determine the concentration for each of the pollutants listed in Table 4 of § 503.13 in the sewage sludge.

2. Using the pollutant concentrations from Step 1 and the APLRs from Table 4 of § 503.13, calculate an AWSAR for each pollutant using equation (2) above.

3. The AWSAR for the sewage sludge is the lowest AWSAR calculated in Step 2.

Appendix B to Part 503—Pathogen Treatment Processes

A. Processes to Significantly Reduce Pathogens (PSRP)

1. Aerobic digestion—Sewage sludge is agitated with air or oxygen to maintain aerobic conditions for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.

2. Air drying—Sewage sludge is dried on sand beds or on paved or unpaved basins. The sewage sludge dries for a minimum of three months. During two of the three months, the ambient average daily temperature is above zero degrees Celsius.

3. Anaerobic digestion—Sewage sludge is treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.

4. Composting—Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the sewage sludge is raised to 40 degrees Celsius or higher and remains at 40 degrees Celsius or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55 degrees Celsius.

5. Lime stabilization—Sufficient lime is added to the sewage sludge to raise the pH of the sewage sludge to 12 after two hours of contact.

B. Processes to Further Reduce Pathogens (PFRP)

1. Composting—Using either the within-vessel composting method or the static aerated pile composting method, the temperature of the sewage sludge is maintained at 55 degrees Celsius or higher for three days.

Using the windrow composting method, the temperature of the sewage sludge is maintained at 55 degrees or higher for 15 days or longer. During the period when the compost is maintained at 55 degrees or higher, there shall be a minimum of five turnings of the windrow.

2. Heat drying—Sewage sludge is dried by direct or indirect contact with hot gases to reduce the moisture content of the sewage sludge to 10 percent or lower. Either the temperature of the sewage sludge particles exceeds 80 degrees Celsius or the wet bulb temperature of the gas in contact with the sewage sludge as the sewage sludge leaves the dryer exceeds 80 degrees Celsius.

3. Heat treatment—Liquid sewage sludge is heated to a temperature of 180 degrees Celsius or higher for 30 minutes.

4. Thermophilic aerobic digestion—Liquid sewage sludge is agitated with air or oxygen to maintain aerobic conditions and the mean cell residence time of the sewage sludge is 10 days at 55 to 60 degrees Celsius.

5. Beta ray irradiation—Sewage sludge is irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (ca. 20 degrees Celsius).

6. Gamma ray irradiation—Sewage sludge is irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium 137, at room temperature (ca. 20 degrees Celsius).

7. Pasteurization—The temperature of the sewage sludge is maintained at 70 degrees Celsius or higher for 30 minutes or longer.

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 122, 123, and 501

[FRL–4515–7]

National Pollutant Discharge Elimination System Sewage Sludge Permit Regulations; State Sludge Management Program Requirements

AGENCY: Environmental Protection Agency.

ACTION: Final rule; technical amendment.

SUMMARY: Under existing regulations that establish sewage sludge permitting and State sewage sludge program requirements, approximately 20,000 publicly owned treatment works and other treatment works treating domestic sewage are required to submit permit applications within 120 days after the promulgation of standards applicable to their sewage sludge use or disposal practice(s). The final sewage sludge use and disposal standards will be published in the **Federal Register** on or near the same date as this final rule. To facilitate the management of these applications, on May 27, 1992, EPA proposed to revise these rules to stagger the submission of permit applications. Additionally, EPA proposed to extend the time period during which the initial set of applications must be submitted from 120 days to 180 days after promulgation of the technical standards. In response to comments received on the May 27, 1992, proposal, EPA is issuing a final rule which requires permit applications in phases and extends the time period in which the initial applications are due following the publication of the final use or disposal standards.

On July 28, 1986, EPA promulgated final regulations for application requirements for facilities that discharge only non-process wastewater, which resulted in internal recodification of § 122.21. Conforming changes were not made to § 123.25(a)(4) which refers to the relevant portions of section 122. These technical corrections are being made as part of this rule.

EFFECTIVE DATE: The effective date of this final rule is March 22, 1993.

ADDRESSES: The public record is located at EPA Headquarters, Environmental Protection Agency, room 220 NE., 401 M Street SW., Washington, DC 20460. For access to the record, call (202) 260–6599 between 9 a.m. and 3:30 p.m. for an appointment.

FOR FURTHER INFORMATION CONTACT: Pamela Mazakas, Permits Division (EN–336), Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 260–6599.

SUPPLEMENTARY INFORMATION:

I. Background
- A. Water Quality Act of 1987
- B. EPA's Sewage Sludge Management Program
- C. Discussion of May 27, 1992, Proposed Rule

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- A. General
- B. Applicability
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Appendix A—List of Regional Sewage Sludge Contacts

I. Background

Implementation of the Clean Water Act (CWA) has increased the extent to which wastewater is treated before being discharged to surface waters. At publicly owned treatment works (POTWs), implementation of secondary treatment requirements under the National Pollutant Discharge Elimination System (NPDES) program, under section 402 of the CWA, has improved effluent quality while increasing the amount of sewage sludge being generated. Proper management of this growing amount of sewage sludge is becoming increasingly important as efforts to remove pollutants from wastewater have become more effective.

Several options exist for dealing with these vast quantities of sewage sludge. One such option is beneficial use. The Agency considers sewage sludge a valuable resource since it contains nutrients and has physical properties that make it useful as a fertilizer and soil conditioner. Sewage sludge has been used for its beneficial qualities on agricultural lands, in forests, for landscaping projects, and to reclaim strip-mined land. EPA will continue to encourage such practices.

Regulation of the use or disposal of sewage sludge is important, however, because improper use or disposal can adversely affect surface water, ground water, wetlands, and public health through a variety of exposure pathways. The multi-media nature of the risks and exposure pathways requires a tightly coordinated comprehensive approach that protects public health and the environment, helps ensure that solving problems in one medium will not create problems for another, and encourages the beneficial use of sewage sludge.

A. Water Quality Act of 1987

Section 406 of the Water Quality Act of 1987, which amended section 405 of the CWA, established a comprehensive program for reducing the risks to public health and the environment from the use or disposal of sewage sludge. The 1987 revisions to the CWA reiterated EPA's obligation to promulgate standards for sewage sludge that protect public health and the environment from reasonably anticipated adverse effects of pollutants in sewage sludge during its use or disposal. Furthermore, the 1987 amendments required that all NPDES permits issued to POTWs and other treatment works treating domestic sewage contain conditions implementing sewage sludge standards, unless such conditions are included in a permit issued under subtitle C of the Solid Waste Disposal Act, part C of the Safe Drinking Water Act, the Marine Protection, Research and Sanctuaries Act, the Clean Air Act, or under a State program approved for administering a section 405(f) sewage sludge permitting program. The amendments also provided that the Administrator may issue separate permits that implement the sewage sludge requirements to treatment works treating domestic sewage that are not subject to section 402 of the CWA or to any of the other listed permit programs or approved State programs. Moreover, the amendments provided that the standards for use or disposal are enforceable directly against any user or disposer of sewage sludge under section 405(e) of the CWA. In other words, a treatment works treating domestic sewage, as well as any user or disposer, must comply with the standards by the statutory compliance deadlines whether or not a permit incorporating the standards has been issued to the treatment works treating domestic sewage.

B. EPA's Sewage Sludge Management Program

In response to the February 1987 amendments to the CWA, EPA: (1) Reproposed regulations for State sludge management programs (first proposed on February 4, 1986 (51 FR 4458)); and (2) proposed revisions to the NPDES program regulations to provide for including sewage sludge requirements in NPDES permits. This was done on March 9, 1988 (53 FR 7642). Final rules were promulgated on May 2, 1989 (54 FR 18716). These regulations establish permit requirements and procedures, as well as requirements for States wishing to implement approved sewage sludge management programs as either part of their NPDES programs or under separate authority. These regulations establish the programmatic framework for implementing the technical standards for sewage sludge use or disposal.

Central to the sewage sludge permitting program is the development of standards that protect public health and the environment from reasonably anticipated adverse effects of pollutants in sewage sludge that is used or disposed. On February 6, 1989 (54 FR 5746), EPA proposed standards for the use or disposal of sewage sludge if the sewage sludge is applied to the land, distributed and marketed, placed in sludge-only landfills (monofills) or surface disposal sites, or fired in a sewage sludge incinerator. These standards will be codified at 40 CFR part 503 and will be published in the **Federal Register** on or near the same date as today's final rule. Among other things, part 503 will likely replace the current part 257 for the disposal of sewage sludge if the sewage sludge is used or disposed in accordance with part 503.

On November 9, 1990 (55 FR 47210), EPA published a notice regarding the availability of information and data collected during the National Sewage Sludge Survey and the anticipated impacts of this information on the proposed part 503 standards. At that time, EPA proposed a number of changes to the part 503, regulation as a result of the survey and as a consequence of information and comments provided by scientific peer review panels and public comments on the proposed part 503 rule. As noted above, the final part 503 regulation will be published in the **Federal Register** on or near the same date as today's final rule.

C. Discussion of May 27, 1992, Proposed Rule

Under the current regulations, publicly owned treatment works (POTWs) and other treatment works treating domestic sewage are required to submit permit applications within 120 days after the promulgation of standards (40 CFR part 503) applicable to their sewage sludge use or disposal

practice(s). EPA estimates that up to 20,000 permit applications may be submitted to EPA at one time as a result of the current requirements. To facilitate the management of these applications, on May 27, 1992, EPA proposed to revise the existing rules to stagger the submission of permit applications. In the first phase, EPA proposed to require permit applications from treatment works treating domestic sewage required to have (or requesting) site-specific limits in the initial period following promulgation of part 503. (These are primarily sewage sludge incinerators.) The second phase would require limited background information from sludge-only treatment works treating domestic sewage (that were not addressed in the first phase). The last phase would require treatment works treating domestic sewage with NPDES permits (that were not addressed in the first phase) to submit sewage sludge information during the NPDES permit renewal process (i.e., over the five year permit cycle). Additionally, EPA proposed to extend the time period during which the initial ("first phase") set of applications must be submitted from 120 days to 180 days after promulgation of part 503.

II. Discussion of Today's Final Rule and Response to Comments

A. General

In developing the final rule, EPA carefully considered public comments received on the May 27, 1992, proposal. In total, EPA received comments from 12 commenters. The majority of comments were from POTWs and municipalities. EPA also received comments from one State agency, one industry, and one environmental group. EPA's response to comments will be included as part of the preamble to this final rule.

The proposed rule noted that applications were due within a certain period of time after the "promulgation" of applicable sewage sludge use or disposal standards. Since promulgation, for regulatory purposes, is generally synonymous with the date the rule is published in the **Federal Register**, EPA is clarifying the final regulations by stating that permit applications are due after the "publication" of applicable sewage sludge use or disposal standards. This clarification is also consistent with the CWA requirement that compliance with part 503 be within one year (or two years if construction is required) after "publication" of an applicable sewage sludge use or disposal standard.

B. Applicability

One commenter was uncertain about who would be affected by today's rule. Under the Federal program, all treatment works treating domestic sewage must apply for a permit. The May 27, 1992, proposal did not address who had to apply for a permit because this was not being changed. The proposal merely addressed the timing for submittal of permit applications. The final regulations addressing sewage sludge, which were promulgated in May 1989, addressed the scope of the permitting program in detail (54 FR 18725–18732). That discussion is summarized briefly below.

All treatment works treating domestic sewage must apply for a permit. A treatment works treating domestic sewage is defined in §§ 122.2 and 501.2 as "a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices." For purposes of this definition, domestic sewage means "waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works."

In summary, as explained in the preamble to the May 2, 1989, regulations, the definition of treatment works treating domestic sewage includes facilities that generate sewage sludge or otherwise effectively control the quality of sewage sludge or the manner in which it is disposed. (Note that land application is not considered disposal since the sewage sludge is being beneficially reused.) Under this definition, "treatment works treating domestic sewage" consequently encompasses facilities that may process sewage sludge as would a generator, but that are separate from the generator's facilities. Thus, commercial sewage sludge handlers (like commercial composting operations) that process sewage sludge from POTWs for sale or give-away are included in the definition since they alter the quality of sewage sludge. However, commercial handlers that only distribute or land apply the sewage sludge without changing the quality are not automatically considered treatment works treating domestic sewage and are not required to submit permit applications unless specifically requested to do so by the permitting authority (54 FR 18726). (The permitting authority will be the EPA Regional Office or a State with an approved sewage sludge program.)

Also included in this definition is any treatment works which treats, in whole or in part, human-generated or household type wastes (domestic wastes or domestic sewage) as part of its wastewater treatment. This includes industrial treatment works that treat site-generated domestic wastes along with process or other wastes generated at the site. It does not, however, apply to sludges which are hazardous wastes, that are covered under subtitle C of RCRA. While industrial treatment works treating site-generated domestic wastes can be considered treatment works treating domestic sewage under the definition, EPA did not propose to address these facilities in the first round of part 503 and such facilities would not, therefore, be required automatically to submit permit applications after the first round of part 503 is published. EPA can, however, individually request permit applications and issue these facilities permits on a case-by-case basis when necessary to protect public health and the environment (54 FR 18726–18728). When technical standards are promulgated that do apply to these facilities, they will have to comply with the permit application requirements of today's rule. The extent to which industrial treatment works that treat domestic wastes generated off-site are covered by the part 503 rule, is addressed in the part 503 rulemaking, published in the **Federal Register** on or near the same date as today's final rule. If part 503 applies to these facilities, they will be required to submit permit applications according to the deadlines established in today's final rule.

Treatment works treating domestic sewage also include owners or operators of disposal facilities such as sewage sludge incinerators, monofills, and surface disposal sites. These facilities must also apply for a permit. Monofills and surface disposal sites are "lands dedicated to the disposal of sewage sludge" (54 FR 18726). Facilities that send the sewage sludge they generate to a treatment or disposal facility must also submit a permit application. The permitting authority has the flexibility to cover both the generator and the treatment/disposal facility in one permit or separate permits (including covering one or both under general permits). Under the Federal program, the definition of treatment works treating domestic sewage does not extend automatically to land where sewage sludge is beneficially used, such as farm land and home gardens (54 FR 18726). Thus, permits would not be required for such site owners (except in an unusual

situation where the site-owner was designated as a treatment works treating domestic sewage by EPA under § 122.1(b)(4)). EPA cannot envision a situation where it would issue a permit to a home gardener who uses sewage sludge products as a fertilizer or soil conditioner.

Another commenter was concerned about how this rule affects those facilities that send sewage sludge to municipal solid waste landfills (MSWLFs). These landfills are regulated under the part 258 regulations promulgated jointly under RCRA and the CWA (56 FR 50978). Part 258 establishes minimum criteria for MSWLFs, including location restrictions, facility design and operating criteria, groundwater monitoring requirements, corrective action requirements, financial assurance requirements, and closure and post-closure care requirements. Requirements differ for new and existing MSWLFs. Regulations for permitting MSWLFs will be contained in a separate rulemaking.

This commenter also pointed out that the CWA does not allow the issuance of a RCRA Subtitle D permit to operate as an adequate substitute for NPDES sewage sludge permit conditions for the sewage sludge generator. EPA generally agrees that a MSWLF's permit would not, in most circumstances satisfy the CWA requirements for the generator's permit to include conditions to implement the sewage sludge regulations. The actual MSWLF will continue to be covered under part 258 and will not be required to apply for a permit under the part 122, 123, or 501 permitting regulations. However, EPA expects sewage sludge generators who send their sewage sludge to MSWLFs to have some sewage sludge requirements in their NPDES permits. These facilities must submit permit applications in accordance with today's final rule. Part 503 proposed to address requirements for sewage sludge going to MSWLFs, but the Agency decided that it was not feasible to develop pollutant-specific limits for this sewage sludge. Consequently, EPA established, in the case of sewage sludge co-disposed with municipal solid waste, a performance standard under section 405(d)(3) of the CWA. EPA determined that the requirements established in part 258 (e.g., liners and leachate systems) will ensure that pollutants are not released into the environment and that public health and the environment are adequately protected.

Part 503 proposed to require that the generating facilities ensure that their sewage sludge meets the part 258 requirements and that the sewage sludge only be sent to State-permitted MSWLFs (54 FR 5794). In other words, each treatment works treating domestic sewage must ensure that the sewage sludge it sends to a MSWLF for disposal is not hazardous (§ 258.20) and does not violate the prohibition on disposal of liquids in landfills (§ 258.28). Furthermore, sewage sludge that is used as cover for a MSWLF must be suitable for that purpose (§ 258.21). Facilities that send their sewage sludge to MSWLFs must apply for permits in accordance with today's final rule.

C. Permit Application Deadlines

Prior to the promulgation of today's rule, any POTW with an existing NPDES permit had to submit permit application information when its next application for NPDES permit renewal was due, or within 120 days of publication of an applicable sewage sludge standard, whichever came first (§§ 122.21(c)(2)(i) and 501.15(d)(1)(ii)(A)). The preamble discussion to the May 2, 1989, notice (54 FR 18737), made it clear that all POTWs covered by the part 503 regulation had to submit permit applications within this 120-day period. Under §§ 122.21(c)(2)(ii) and 501.15(d)(1)(ii)(B), any other existing treatment works treating domestic sewage, not subject to the NPDES program (i.e., a "sludge-only facility"), had to also submit the permit application information within 120 days of publication of an applicable sewage sludge standard or when requested by the Director. For treatment works treating domestic sewage commencing operation after an applicable part 503 standard was published, §§ 122.21(c)(2)(iii) and 501.15(d)(1)(ii)(C) required that permit applications be submitted at least 180 days prior to the date proposed for commencing operations.

These application deadlines would have meant that approximately 16,000 POTWs and an estimated three to five thousand other treatment works treating domestic sewage would have had to submit application information within 120 days after publication of part 503. EPA did not intend to reopen existing permits immediately or issue new permits to all facilities who sent in the permit application information within this 120-day period. Rather, EPA's original intent was to use the information to identify priorities for permit modification or issuance. The May 27, 1992, proposal noted that several changes have occurred since promulgation of the permit requirements that make this approach less necessary and less practical.

First, EPA is working to enhance the direct enforceability of the part 503 standards. Section 405(e) of the CWA states that it will be unlawful for anyone to dispose of sewage sludge except in accordance with the regulations.

Second, as a result of the National Sewage Sludge Survey, as well as peer review and public comment on the proposed part 503 rulemaking, EPA has improved knowledge of the prevalence and relative risks of different sewage sludge use or disposal practices. Consequently, the Agency is better equipped to direct permitting activities to those treatment works treating domestic sewage that require priority attention.

Third, EPA is concerned about effectively using limited resources. Completing an initial screening of up to 20,000 applications would be a monumental task and the Agency does not believe it to be feasible within a short time period. Further, much of the information submitted within 120 days of when part 503 is published may be outdated by the time work can actually begin in evaluating the information and developing permits. Consequently, treatment works treating domestic sewage would likely need to submit new/updated information.

Several comments were received on the discussion of this new approach in the May 27, 1992, proposal. One commenter was concerned with how the self-implementing nature of part 503 would influence reporting, record keeping and enforcement. The monitoring, record keeping and reporting requirements expected to be established in part 503 will become effective within several months after the rule is published. (Note that part 503 will be published in the **Federal Register** on or near the same date as today's final rule.) These requirements will provide the baseline data from which compliance evaluations will be performed and, where required, upon which enforcement actions will be taken. Part 503 is expected to require the submittal of information necessary to ascertain compliance and the rule will outline the minimum requirements for data collection by the regulated facilities. These data are then required to be reported to the EPA after the effective date of part 503 at the frequency specified in the regulation. This will be true even in the absence of a permit. Therefore, inclusion of monitoring, record keeping, and reporting requirements in part 503 enhances the self-implementation or direct enforceability of part 503. Permits, when issued, will also include monitoring, record keeping, and

reporting requirements that, in appropriate circumstances, may be more comprehensive than part 503.

Other commenters were concerned about the reliance on the self-implementing provisions of part 503 and suggested this should not be a substitute for a strong permitting program. EPA agrees and will rely largely on the self-implementing nature of part 503 until permits can be issued. The CWA requires the Agency to include requirements to implement the part 503 standards in NPDES permits issued to treatment works treating domestic sewage. Furthermore, the Agency has the authority to issue permits to facilities without NPDES permits under section 405(f)(2) of the CWA. In addition, the Agency believes that permits are necessary for several other reasons. For sludge-only facilities, permits are an effective means of bringing newly-regulated facilities into the program. Permits add certainty to each party's obligations by spelling them out in a single document. Permits also facilitate compliance by specifying requirements, denoting how compliance will be measured, and providing a time for questions/challenges to be addressed through the permit issuance and public comment process rather than through an enforcement action. Additionally, a permit can provide a partial "permit as a shield" defense for compliance with the permit (§ 122.25(a) (2)). The process for public participation, which is a part of every permit, is also an important goal of the CWA and it helps to build public acceptance of the beneficial use of sewage sludge. Permits can allow consideration of site-specific factors to adjust national standards in appropriate instances (for incinerators, some standards must be set through a permit). Furthermore, permits clarify relationships between additional parties and the permittee's responsibilities when other parties are involved. Lastly, permit "boilerplate" provisions supplement the technical standards by establishing general duties for permittees and identifying additional specificity. For example, the boilerplate will contain provisions addressing the following: The duty to notify the permitting authority of changes in use or disposal practices; a reopener clause allowing the permit to be reopened when new technical standards are promulgated; a duty to report noncompliance and mitigate adverse environmental consequences of noncompliance; a duty of proper operation and maintenance; and detailed monitoring and reporting requirements.

One commenter requested that EPA include information on the interim program in the final rule, suggesting that if this program had been fully carried out, EPA would not experience the anticipated rush of permit applications soon after part 503 is published and hence, the regulations would not need to be changed. In response to this suggestion, EPA believes that it made it clear in the May 2, 1989, regulations that even if a permittee had sewage sludge limits in a permit when an applicable sewage sludge use or disposal standard was published, the permittee must apply for a new permit within 120 days of that standard's publication (54 FR 18737). In addition, permitting authorities would have received new information from each facility, since they would be looking for specific information to ensure compliance with the technical standards of part 503. (Although the interim program requires the placement of sewage sludge requirements in permits, the requirements could not possibly be the same as the requirements which will be promulgated under part 503 later this year.) Section 122.44 (c) (4) specifically states that permits issued to treatment works treating domestic sewage must include a reopener clause to include applicable standards for sewage sludge use or disposal. As noted in the proposed rule, today's final rule does not delay compliance with the part 503 standards—it merely requires permit applications to be submitted in phases.

Another commenter suggested that applications only be submitted when requested by EPA. EPA does not believe this is the best approach to requiring permit applications. The Clean Water Act generally envisions implementation of the sewage sludge program through permits. Since EPA contemplates the eventual permitting of all treatment works treating domestic sewage, the Agency prefers that the submittal of permit applications be triggered automatically rather than through individual letters sent to all treatment works treating domestic sewage. For those needing site-specific requirements to implement part 503, requiring permit applications within a reasonable time after part 503 will facilitate compliance with the statutory deadlines.

One commenter thought that it would be unwise to delay the submittal of permit applications if it meant that the development of "management plans" would also be delayed. (Because the proposed regulations did not discuss "management plans," we assume this refers to "land application plans" under §§ 122.21(d)(3)(ii) and 501.15(a)(2)(ix).) Instead, the commenter suggested that all treatment works treating domestic sewage that will be required to apply for a permit, develop and keep on file a "management plan" within one year of promulgation of part 503. The commenter suggested that if a State intended to apply for authorization, such a requirement would expedite and facilitate a smooth transition in issuing permits. Furthermore, the commenter suggested that EPA require notice from all treatment works treating domestic sewage when their plans were complete.

EPA does not agree that it is necessary to require treatment works treating domestic sewage to develop land application plans prior to submitting a permit application. Rather, EPA intended the plan to be submitted with the permit application and be subject to permit issuance procedures—including the public notice and comment procedures. By accommodating applicants that have not yet identified all land application sites, the land application plans are meant to fill the gap in the permit so that permit modifications are not necessary each time a new land application site is chosen. Therefore, EPA believes it is inappropriate to require the development of such plans until permit applications are filed. EPA recommends, however, that if a treatment works treating domestic sewage knows that it will need to do a land application plan, then it should begin developing the plan well in advance of filing the permit application.

As for State programs, nothing prohibits States from requiring these plans sooner than when permit applications are due. Furthermore, EPA would encourage States intending to submit programs for approval to establish State requirements that would make the transition process easier.

In light of the discussion above, and in response to comments received on the proposed rule, EPA is adopting the proposed approach to phase in permit application submittals as articulated below.

1. The First Phase

In the first phase, EPA proposed to focus on all treatment works treating domestic sewage required to have (or requesting) site-specific pollutant limits as provided in part 503. This first phase includes several types of treatment works treating domestic sewage but targets, in particular, sewage sludge incinerators.

The proposal stated that focusing on sewage sludge incinerators first is appropriate because available data indicate that, of the most common use or disposal practices, these facilities

pose the greatest risk to public health. Several commenters objected to this statement and requested to see supporting data. This statement was based upon the data developed for the February 6, 1989, proposed part 503 regulations. The supporting document, "Human Health Risk Assessment for Municipal Sludge Disposal: Benefits of Alternative Regulatory Options," is available for review as part of the docket to this rule. Appointments to review this document at EPA Headquarters can be made by calling Pamela Mazakas at 202/260–6599. This document may also be purchased through the National Technical Information Service (NTIS) at a cost of $43.00 plus shipping and handling (NTIS #PB89–136626). This information showed that incineration was associated with the largest number of cancer cases and lead-associated adverse health effects of the use or disposal practices evaluated at that time (54 FR 5782). It is important to note that none of the use or disposal practices were found to be a significant risk. Further, the final part 503 standards are designed to provide an equivalent level of protection from all use or disposal practices regulated under that rule.

Other commenters asked for clarification of what is considered a treatment works treating domestic sewage that is required to have (or able to request) site-specific limits. One commenter specifically requested how EPA would classify, for purposes of seeking site-specific limits, storage lagoons and injection of sewage sludge into the soil at a dedicated site on which no crops are grown. Although EPA appreciates the complexity of these issues, the availability of site-specific limits is determined under part 503 and these issues will be addressed in the preamble to part 503. (Note that part 503 will be published in the **Federal Register** on or near the same date as today's final rule.) As discussed below, today's rule lengthens the time during which permit applications may be submitted after part 503 is published. Permit applicants should have ample time after part 503 is published to determine whether site-specific limits are required or desired.

Under the proposal, EPA noted that requests for site-specific limits would be considered after this first round of permit applications only for good cause. One commenter disagreed and suggested that requests for site-specific limits should be available any time data supported them. To set permitting priorities and control the permit application process, EPA has determined that it is appropriate to limit the availability of site-specific requests. If available data support site-specific limits, the request should be made when such data are discovered. If additional data are discovered after the initial 180-day period after part 503 is published, then good cause may exist for consideration of site-specific limits. Other examples of good cause include instances when a treatment works treating domestic sewage changes its surface disposal site or switches from one practice to another (e.g., surface disposal to incineration).

One commenter raised the issue of defining "existing" facilities. Unlike the NPDES program, permits are not necessary for either existing or new facilities to operate. Furthermore, the technical standards are the same for new and "existing" treatment works treating domestic sewage. Existing facilities and new facilities will be responsible for ensuring compliance with part 503 within one year after part 503 is published (or two years if construction is required).

The only real difference between new and existing facilities is when they have to apply for permits. An existing facility must apply for a permit according to today's rule—within 180 days for a facility required to have or requesting site-specific requirements, at the time of its next NPDES permit renewal (for a facility with an NPDES permit), or, for a sludge-only facility, it must submit limited data within one year and a complete application within 180 days from when requested by the permitting authority. EPA is retaining existing requirements for new facilities which must apply for a permit 180 days prior to beginning operation. This provision also applies to new "sludge-only" facilities who must submit full permit applications 180 days prior to beginning operation.

The commenter mentioned that it had a facility under construction now which should be complete at about the same time as the publication of part 503. For purposes of today's rule, EPA will consider new treatment works treating domestic sewage as those which began construction after the publication of an applicable sewage sludge use or disposal standard. For this reason, the commenter's facility would be considered an existing facility and would be required to submit its application within 180 days for site-specific requirements, at the time of its next NPDES permit renewal, or it must submit limited data within one year and complete applications within 180 days from when requested by the permitting authority, as appropriate.

One commenter suggested that EPA at least require permit applications within 120 days for land application of sewage sludge that does not meet the "super clean" sewage sludge criteria anticipated in the part 503 rule (55 FR 47259). EPA does not agree with the suggestion to require permit applications within 120 days of when part 503 is published for land application unless sewage sludge meets "super clean" criteria. EPA expects that the direct enforceability of the part 503 standards together with associated record keeping and reporting requirements will provide protection. The standards for land application of sewage sludge which is not "super clean" will be as protective as the standards for land application of "super clean" sewage sludge. Furthermore, if the permitting authority anticipates a problem, it has the authority to request permit applications sooner than the time frames established under today's final rule.

For the reasons stated above, EPA is adopting the proposed requirement for treatment works treating domestic sewage required to have (or requesting) site-specific limits to submit permit applications within 180 days of when part 503 is published §§ 122.21(c)(2)(i) and 501.15(d)(1)(ii)(A). (See discussion below for further information on the extension of the time period from 120 days to 180 days.) (Note that part 503 will be published in the **Federal Register** on or near the same date as today's final rule.)

2. The Second Phase

Instead of requiring an immediate submittal of a complete application from sludge-only treatment works treating domestic sewage, EPA proposed that they submit limited background information within one year of publication of an applicable sewage sludge use or disposal standard. (To the extent these treatment works treating domestic sewage were required to have, or wanted to request, site-specific limits, EPA proposed that they come forward during the first phase and submit permit applications within 180 days of publication of an applicable sewage sludge use or disposal standard.)

EPA proposed that these sludge-only treatment works treating domestic sewage submit the following information to the Director:

(1) Name, mailing address and location of the treatment works treating domestic sewage;

(2) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public or other entity;

(3) A description of the sewage sludge use or disposal practices (including,

where applicable, the location of any sites where sewage sludge is transferred for treatment, use, or disposal, as well as the name of the applicator or other contractor who applies the sewage sludge to land if different from the treatment works treating domestic sewage, and the name of any distributors if the sewage sludge is sold or given away in a bag or similar enclosure for application to the land, if different from the treatment works treating domestic sewage);

(4) Annual amount of sewage sludge generated, treated, used or disposed (dry weight basis); and

(5) The most recent data the treatment works treating domestic sewage may have on the quality of the sewage sludge.

Some treatment works treating domestic sewage are not currently subject to the existing NPDES program for effluent discharges (i.e., they are sludge-only facilities). EPA will use this second phase to create an inventory of these sludge-only treatment works treating domestic sewage and to set permitting priorities.

One commenter suggested that the limited information being submitted by sludge-only treatment works treating domestic sewage is inadequate to set priorities and that, at a minimum, they ought to be required to submit sewage sludge quality data. EPA agrees that sewage sludge quality data are important and proposed in §§ 122.21(c)(2)(iii)(E) and 501.15(d)(1)(ii)(C)(5) that existing data be submitted. EPA believes this provision is adequate since the proposed part 503 regulation had self-implementing monitoring and record keeping requirements which would generate data on sludge quality. If, as anticipated, these monitoring and record keeping requirements are in the final rule, they will be effective soon after part 503 is published and, therefore, all treatment works treating domestic sewage should be generating new data, which would be available data required under §§ 122.21(c)(2)(iii)(E) and 501.15(d)(1)(ii)(C)(5). EPA believes that receiving these data from "sludge-only" treatment works treating domestic sewage will provide adequate information to establish permitting priorities.

EPA believes that it is appropriate to only require limited data from "sludge-only" treatment works treating domestic sewage. As noted above, this data will serve to inventory the sludge-only facilities as well as provide the permitting authority with information to set permitting priorities. Additionally, the permitting authority maintains the ability to require any treatment works treating domestic sewage to submit full permit applications at any time if it determines a permit is necessary to protect public health and the environment. One commenter was not sure how the permitting authority would be able to require complete applications from sludge-only treatment works treating domestic sewage. Sections 122.21(c)(2)(iv) and 501.15(d)(1)(ii)(D) of today's final rule state that the permitting authority maintains the ability to require permit applications sooner than the times defined in the rule—for any treatment works treating domestic sewage. One commenter thought these provisions were inconsistent with the provision requiring only limited data from sludge-only treatment treating domestic sewage. The limited data submitted by the sludge-only treatment works treating domestic sewage is only preliminary data. This limited information will allow the permitting authority to set permitting priorities. If the permitting authority determines that the sludge-only facility needs to submit a full permit application, it may request a full application either after reviewing the limited data, or prior to the one year deadline for the submission of the limited data if necessary. It would not be necessary for the sludge-only facility to be in noncompliance before the permitting authority can request it to submit a full application. As noted earlier, the facility may become one of the permitting authority's priorities either by the nature of its practice or by the fact that other facilities already have permits.

To clarify when sludge-only facilities must submit their limited data, EPA is considering the ultimate use or disposal of a generator's sewage sludge to be the generator's use or disposal practice—even if the sewage sludge use or disposal is carried out by someone else. Therefore, sludge-only treatment works treating domestic sewage will have to submit their information within one year after publication of part 503 if the sewage sludge they generate is ultimately land applied, incinerated in a sewage sludge incinerator, placed in a surface disposal site, or disposed in a MSWLF. For example, if a sludge-only treatment works treating domestic sewage generates sewage sludge and sends that sewage sludge to someone else's sewage sludge incinerator, the generating treatment works treating domestic sewage will still have to submit its information within one year after publication of part 503. (In this case, the incinerator will also be considered a treatment works treating domestic sewage and will be required to submit permit application information as well.)

A few commenters were concerned about how sludge-only treatment works treating domestic sewage will know to submit information. The sewage sludge implementation regulations have been in existence since 1989. EPA has held numerous workshops in an attempt to reach most of the regulated community. EPA will continue its efforts to identify and notify sludge-only permittees of their obligations. Realizing that sludge-only facilities are not part of the existing NPDES program, EPA will be working with trade associations and other organizations to distribute information on the regulations to this group. Furthermore, many States already regulate sludge-only facilities and EPA intends to work closely with State agencies to ensure that such facilities are notified of their requirements under the Federal program.

In light of the above discussion, EPA is adopting the proposed changes to require sludge-only treatment works treating domestic sewage (not required to have or requesting site-specific limits) to submit limited data within one year after publication of part 503 (§§ 122.21(c)(2)(iii) and 501.15(d)(1)(ii)(C)). (Note that part 503 will be published in the **Federal Register** on or near the same date as today's final rule.)

3. The Third Phase

The third phase consists of treatment works treating domestic sewage with NPDES permits not addressed under the first phase. The proposal required that these treatment works treating domestic sewage submit the application information in accordance with NPDES permit renewal procedures. Such procedures require permit applications at least 180 days before the NPDES permit is due to expire. Thus, permit applications would be submitted over the course of a five year permit cycle. In the interim period, before permits are issued to these facilities, the part 503 standards will be directly enforceable, providing protection to public health and the environment. Furthermore, if EPA determines that it is necessary to require sewage sludge application information and to reopen a permit before renewal, it may do so at its discretion under the authority of 40 CFR 122.62(a) (3) and (7) to protect public health or the environment.

Several commenters wanted clarification for situations where an NPDES permit has been

administratively continued (or extended). Today's rule requires NPDES permittees (not required to have or seeking site-specific limits) to submit sewage sludge data at the time of their next NPDES permit renewal applications. NPDES permittees, however, should have been submitting general information on sewage sludge with their permit applications since 1989 when part 122 was revised to require this (54 FR 18716). Therefore, the permitting authority should already have basic sewage sludge information from any NPDES permittee who filed a permit application after 1989, and sewage sludge requirements should be included in the NPDES permit. Such permittees do not have to automatically resubmit new data during the term of an administratively continued permit until the next permit application is due. EPA, however, expects the permitting authority to use its authority to ask for additional sewage sludge information, which may be necessary to ensure compliance with part 503, sooner than the next regularly scheduled application deadline under § 122.21(c)(2)(iv). Likewise, for any facilities which may be operating under a permit that was administratively continued prior to 1989, sewage sludge data would not be required to be submitted until the next NPDES permit application is due. Again, the permitting authority should use its discretion to ensure that adequate information is included in the permit application process and to expeditiously incorporate part 503 requirements into reissued permits.

One commenter was concerned that permit applications with sewage sludge information would not be submitted for up to 6 or 8 years because of the backlog in permit issuance. Another commenter suggested that if States fail to seek program approval, it would take EPA "a decade or two to do the job which must surely exceed that envisioned by Congress." The Agency agrees that it will not be possible to issue all permits immediately given limited resources. EPA believes that sewage sludge management remains a local concern that should be handled at the State and local level. Until States obtain program approval, EPA will do its best to ensure that the sewage sludge program is being implemented in a manner that takes into account the risks posed by sewage sludge use or disposal. It is important to note that the Agency will also continue to encourage and assist States to assume responsibility for implementing the sewage sludge program. The CWA requires compliance with part 503 within one year after its publication (or two years if construction is required), regardless of what is embodied in an NPDES permit. Thus, EPA's ability to enforce compliance with the standards is not wholly dependant upon issuance of permits.

EPA is adopting the proposed language to require that permit applications from those treatment works treating domestic sewage be submitted in accordance with NPDES permit renewal procedures. Such procedures require permit applications at least 180 days before the NPDES permit is due to expire. (Sections 122.21(c)(2)(ii) and 501.15(d)(1)(ii)(B).)

D. Time Period for Compiling Application Data

EPA proposed to focus the application requirements on those treatment works treating domestic sewage required to have (or requesting) site-specific pollutant limits. Today's final rule has the same focus. Because 120 days may be insufficient to generate the necessary information for site-specific permits, EPA proposed to extend the time period to 180 days after publication of part 503.

Two commenters noted that they appreciated the increase from 120 days to 180 days but stated that they did not believe 180 days would be sufficient either. Similarly, one commenter suggested that EPA require the submission of all information except the site-specific analysis (unless already completed) within the 180-day period. This commenter suggested applicants be required to submit a rationale for the need for additional time to complete the site-specific analysis and a schedule for completing the analysis during the 180-day period but that the actual analysis could be submitted later. The Agency believes that part 503 will be explicit enough so that facilities will be able to gather the necessary information. EPA is driven by the compliance deadlines required by Congress in the CWA. EPA believes that the 180-day period established in today's rule strikes a balance between Congress's compliance date and EPA's need to receive complete information in permit applications for those facilities whose standards need to be established on a site-specific basis.

One commenter objected to the extension from 120 to 180 days for site-specific applications and wanted to see more clarification on which applicants fall into this group and the potential risk they pose. As noted earlier in this preamble, determining which facilities are required to have (or able to request) site-specific limits, is an issue that will be determined in the part 503 rule. Therefore, this will be discussed in the preamble which accompanies that rule. Furthermore, now that the Agency has a better understanding of the likely part 503 requirements, the Agency has determined that 120 days is too restrictive and that 180 days is more appropriate. For example, sewage sludge incinerators may need to submit air dispersion data and conduct control efficiency tests (trial burns) that could take a considerable period of time to complete. EPA believes the 180-day deadline will foster the submittal of complete and accurate applications.

EPA is adopting the changes as proposed to extend the time period from 120 days to 180 days after part 503 is published for treatment works treating domestic sewage to submit permit applications.

For consistency, EPA also proposed to modify § 122.1(b)(4). This provision states that a user or disposer of sewage sludge designated as a treatment works treating domestic sewage must submit a permit application within 120 days of being notified by the Regional Administrator that a permit is required. EPA proposed to extend this time period from 120 days to 180 days after a treatment works treating domestic sewage is notified that a permit is required. EPA received no comments on this change and it is being adopted as proposed.

For a summary of the general changes to the existing requirements for when permit applications have to be submitted (under parts 122, 123, and 501) made by today's rule, see Table II–1.

TABLE II–1.—SUMMARY OF GENERAL CHANGES MADE BY TODAY'S FINAL RULE

	Old requirements	New requirements
Facilities required to have (or requesting) site-specific limits: NPDES permittees.	Submit sewage sludge application information within 120 days after part 503 promulgation.	Submit sewage sludge application information within 180 days after part 503 publication *†
Non-NPDES permittees ("sludge-only").	Submit sewage sludge application information within 120 days after part 503 promulgation.	Submit sewage sludge application information within 180 days after part 503 publication *†

TABLE II–1.—SUMMARY OF GENERAL CHANGES MADE BY TODAY'S FINAL RULE—Continued

	Old requirements	New requirements
Facilities not required to have (or requesting) site-specific limits:NPDES permittees.	Submit sewage sludge application information within 120 days after part 503 promulgation.	Submit sewage sludge application information at the time of next NPDES permit renewal application †
Non-NPDES permittees ("sludge-only").	Submit sewage sludge application information within 120 days after part 503 promulgation.	Submit limited sewage sludge information within 1 year after part 503 publication †

* Applicant may request site-specific pollutant limits later upon a showing of good cause.

† The permitting authority may request that permit applications be submitted earlier than the times set forth in this table. Permit applications are due 180 days after the permitting authority makes such a request.

E. Compliance With the CWA and Part 503

Several commenters expressed concerns over the part 503 compliance deadlines (one year after publication or two years after publication if construction is required). EPA has no authority to provide additional time for compliance since these deadlines were specifically set by Congress in section 405(d)(2)(D) of the Clean Water Act.

F. State Programs and the Permitting Authority

For consistency, EPA proposed to include the above changes to the permitting procedures into 40 CFR 123.25(a)(4) by cross-referencing the part 122 provisions being amended today. This means that States which seek approval of a modification to their NPDES programs to regulate sewage sludge use or disposal would be expected to have comparable regulations as part of their programs. EPA received no comments on the proposed change and it is being adopted as proposed.

EPA will be responsible for issuing permits that implement the sewage sludge use or disposal standards, unless those standards are implemented through certain other Federal permits or permits issued by a State with an EPA-approved sewage sludge management program. Because no States have received EPA approval of their State sewage sludge management programs yet, EPA will be the permitting authority initially and all application information must be submitted directly to the appropriate EPA Regional offices, unless notified otherwise by the Regional office. (Appendix A lists the addresses for the EPA Regional offices and the States within each Region.)

One commenter was confused about where permit applications are to be sent in "approved States." In States with approved sewage sludge programs, the permit application information is submitted to the State agency which has been approved by EPA to administer the federal sewage sludge program in lieu of EPA. Treatment works treating domestic sewage should note that a State can have an approved sewage sludge program even if it does not have an approved NPDES program. Similarly, just because a State has an approved NPDES program, does not mean it has an approved sewage sludge program as well. Questions about the current status of State program approvals at any particular time should be directed to EPA Regional offices.

Currently there are no States with formally approved sewage sludge programs, although several are operating under Memoranda of Agreement with the EPA Regional Offices for interim sewage sludge programs. Once the part 503 regulations are final, the interim programs will no longer be effective and all sewage sludge data should be submitted to the Regional EPA Office, until a State receives formal sewage sludge program approval. In States with approved NPDES programs, the part of the permit application containing sewage sludge data must be sent to EPA, while the rest of the permit information is sent to the State, unless otherwise directed by the EPA Regional office. To clarify this further, the ending phrase of § 122.21(c)(2)(ii) has been modified to instruct treatment works treating domestic sewage with NPDES permits to submit sewage sludge data "at the time of their next NPDES permit renewal application" instead of "with their next NPDES permit renewal application."

Several commenters requested clarification on the interaction between the Federal program and State programs—specifically addressing permits, enforcement and reporting. The Federal program will not supersede or replace a State program. Rather, until a State receives formal program approval, the regulated community may be subject to both the State and Federal programs. This could mean that a treatment works treating domestic sewage could be required to obtain two permits, conduct monitoring, and report results—both under the Federal and State programs. The Federal permit may include more stringent requirements than a State permit, and vice versa. Section 122.1(f) allows States to have sewage sludge requirements that are different from, or more stringent than, those in the Federal regulations. The State will continue to enforce its requirements and EPA will enforce the Federal requirements. In States with approved sewage sludge programs, the States will be primarily responsible for enforcement while EPA will maintain enforcement and oversight authority.

Although in the short term treatment works treating domestic sewage may be subject to two separate programs, EPA is working to assist States in their applications to take on Federally approved programs so the requirements can be rolled into one program instead of two.

G. Technical Correction to § 123.25

On July 28, 1986, EPA promulgated final regulations for application requirements for facilities that discharge only non-process wastewater. At 51 FR 26991, EPA redesignated § 122.21(h)–(o) as (i)–(p) and added a new § 122.21(h). Conforming changes were not made to § 123.25(a)(4) which refers to relevant portions of section 122. These technical corrections are being made as part of today's rule.

III. Regulatory Development Process

A. Executive Order 12291

Under Executive Order 12291, EPA must judge whether a regulation is major and, therefore, subject to the requirement of a Regulatory Impact Analysis. A major rule is defined as a regulation that is likely to result in:

(1) An annual effect on the economy of $100 million or more;

(2) A major increase in the costs or prices for consumers, individual industries, Federal, State and local government agencies, or geographic regions; or

(3) A significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

Today's final rule imposes no new criteria but rather lessens the burden for submitting permit applications. Instead of requiring the submission of all permit applications within 120 days after the publication of part 503, the submission of applications is to be done in phases. This avoids the potential for a treatment works treating domestic sewage to have to submit two applications because information became outdated before a permit could be written. Therefore, this final rule does not constitute a major

rulemaking. These regulations were submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act

The information collection requirements contained in this rule were detailed in Information Collection Request 226.10. These requirements have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and are currently assigned OMB control number 2040–0086.

Public reporting burden for this collection of information is estimated at four to five hours per response, with an average burden of 4.83 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Chief, Information Policy Branch, PM–223Y, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460; and to the Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

C. Regulatory Flexibility Act

Under the Regulatory Flexibility Act, 5 U.S.C. 601 et seq., EPA is required to prepare a Regulatory Flexibility Analysis to assess the impact of its rules on small entities. No Regulatory Flexibility Analysis is required, however, where the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Today's final rule most directly affects treatment works that use or dispose of sewage sludge that are already required to obtain permits under existing Federal or State programs. Today's rule merely changes existing regulations to provide for the submittal of permit applications in phases. In most cases, small facilities will have additional time to submit their applications. Accordingly, I hereby certify pursuant to 5 U.S.C. 605(b) that these amendments will not have a significant impact on a substantial number of small entities.

List of Subjects

40 CFR Part 122

Administrative practice and procedure, Confidential business information, Reporting and recordkeeping requirements, Sewage disposal, Waste treatment and disposal, Water pollution control.

40 CFR 123

Confidential business information, Hazardous materials, Reporting and recordkeeping requirements, Sewage disposal, Waste treatment and disposal, Water pollution control, Penalties.

40 CFR 501

Confidential business information, Environmental protection, Reporting and recordkeeping requirements, Publicly owned treatment works, Sewage disposal, Waste treatment and disposal.

Dated: November 25, 1992.

F. Henry Habicht II,

Acting Administrator.

For the reasons set out in the preamble, parts 122, 123, and 501 of title 40, chapter I of the Code of Federal Regulations are amended as follows:

PART 122—EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

1. The authority citation for part 122 continues to read as follows:

Authority: The Clean Water Act, 33 U.S.C. 1251 *et seq.*

2. Section 122.1 is amended by adding an OMB control number to the end of the section and by revising the second sentence of paragraph (b)(4) to read as follows:

§ 122.1 Purpose and scope.

* * * * *

(b) * * *

(4) * * * Any person designated as a "treatment works treating domestic sewage" shall submit an application for a permit under § 122.21 within 180 days of being notified by the Regional Administrator that a permit is required. * * *

* * * * *

(Approved by the Office of Management and Budget under OMB control number 2040–0086.)

3. Section 122.21 is amended by redesignating paragraphs (c)(2) (i), (ii), and (iii) as (c)(2) (ii), (iii), and (v) respectively and revising newly redesignated paragraphs (c)(2) (ii) and (iii); and adding new paragraphs (c)(2)(i) and (c)(2)(iv) to read as follows:

§ 122.21 Application for a permit (applicable to State programs, see § 123.25).

* * * * *

(c) * * *

(2) *Permits under section 405(f) of CWA.* (i) Any existing "treatment works treating domestic sewage" required to have, or requesting site-specific pollutant limits as provided in 40 CFR part 503, must submit the permit application information required by paragraph (d)(3)(ii) of this section within 180 days after publication of a standard applicable to its sewage sludge use or disposal practice(s). After this 180 day period, "treatment works treating domestic sewage" may only apply for site-specific pollutant limits for good cause and such requests must be made within 180 days of becoming aware that good cause exists.

(ii) Any "treatment works treating domestic sewage" with a currently effective NPDES permit, not addressed under paragraph (c)(2)(i) of this section, must submit the application information required by paragraph (d)(3)(ii) of this section at the time of its next NPDES permit renewal application. Such information must be submitted in accordance with paragraph (d) of this section.

(iii) Any other existing "treatment works treating domestic sewage" not addressed under paragraphs (c)(2) (i) or (ii) of this section must submit the information listed in paragraphs (c)(2)(iii) (A)–(E) of this section, to the Director within 1 year after publication of a standard applicable to its sewage sludge use or disposal practice(s). The Director shall determine when such "treatment works treating domestic sewage" must apply for a permit.

(A) Name, mailing address and location of the "treatment works treating domestic sewage;"

(B) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public or other entity;

(C) A description of the sewage sludge use or disposal practices (including, where applicable, the location of any sites where sewage sludge is transferred for treatment, use, or disposal, as well as the name of the applicator or other contractor who applies the sewage sludge to land, if different from the "treatment works treating domestic sewage," and the name of any distributors if the sewage sludge is sold or given away in a bag or similar enclosure for application to the land, if different from the "treatment works treating domestic sewage");

(D) Annual amount of sewage sludge generated, treated, used or disposed (dry weight basis); and

(E) The most recent data the "treatment works treating domestic sewage" may have on the quality of the sewage sludge.

(iv) Notwithstanding paragraphs (c)(2) (i), (ii), or (iii) of this section, the

Director may require permit applications from any "treatment works treating domestic sewage" at any time if the Director determines that a permit is necessary to protect public health and the environment from any potential adverse effects that may occur from toxic pollutants in sewage sludge.

* * * * *

PART 123—STATE PROGRAM REQUIREMENTS

4. The authority citation for part 123 continues to read as follows:

Authority: Clean Water Act, 33 U.S.C. 1251 *et seq.*

5. Section 123.25 is amended by revising paragraph (a)(4) to read as follows:

§ 123.25 Requirements for permitting.

(a) * * *

(4) § 122.21 (a)–(b), (c)(2), (e)–(k), and (m)–(p)—(Application for a permit);

* * * * *

PART 501—STATE SLUDGE MANAGEMENT PROGRAM REGULATIONS

6. The authority citation for part 501 continues to read as follows:

Authority: Clean Water Act, 33 U.S.C. 1251 *et seq.*

7. Section 501.15 is amended by redesignating paragraphs (d)(1)(ii) (A) , (B) and (C) as paragraphs (d)(1)(ii) (B), (C) and (E) respectively and revising newly designated paragraphs (d)(1)(ii) (B) and (C); and adding new paragraphs (d)(1)(ii)(A) and (d)(1)(ii)(D) to read as follows:

§ 501.15 Requirements for permitting.

* * * * *

(d) * * *

(1) * * *

(ii) (A) Any existing "treatment works treating domestic sewage" required to have (or requesting) site-specific pollutant limits as provided under 40 CFR part 503, must submit the permit application information required by paragraph (a)(2) of this section within 180 days after publication of a standard applicable to its sewage sludge use or disposal practice(s). After this 180-day period, "treatment works treating domestic sewage" may only apply for site-specific pollutant limits for good cause and such requests must be made within 180 days of becoming aware that good cause exists.

(B) Any "treatment works treating domestic sewage" with a currently effective NPDES permit, not addressed under paragraph (d)(1)(ii)(A) of this section, must submit the application information required by paragraph (a)(2) of this section when the next application for NPDES permit renewal is due.

(C) Any other existing "treatment works treating domestic sewage" not addressed under paragraphs (d)(1)(ii) (A) or (B) of this section must submit the information listed in paragraphs (d)(1)(ii)(C)(*1*)–(*5*) of this section, to the Director within one year after publication of a standard applicable to its sewage sludge use or disposal practice(s). The Director shall determine when such "treatment works treating domestic sewage" must apply for a permit.

(*1*) Name, mailing address and location of the "treatment works treating domestic sewage";

(*2*) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public or other entity;

(*3*) A description of the sewage sludge use or disposal practices (including, where applicable, the location of any sites where sewage sludge is transferred for treatment, use, or disposal, as well as the name of the applicator or other contractor who applies the sewage sludge to land if different from the "treatment works treating domestic sewage," and the name of any distributors if the sewage sludge is sold or given away in a bag or similar enclosure for application to the land, if different from the "treatment works treating domestic sewage");

(*4*) Annual amount of sewage sludge generated, treated, used or disposed (dry weight basis); and

(*5*) The most recent data the "treatment works treating domestic sewage" may have on the quality of the sewage sludge.

(D) Notwithstanding paragraphs (d)(1)(ii) (A) , (B), or (C) of this section, the Director may require permit applications from any "treatment works treating domestic sewage" at any time if the Director determines that a permit is necessary to protect public health and the environment from any potential adverse effects that may occur from toxic pollutants in sewage sludge.

* * * * *

Editorial Note: This appendix will not appear in the Code of Federal Regulations.

Appendix A—List of Regional Sewage Sludge Contacts

Region 1

(Maine, New Hampshire, Vermont, Connecticut, Massachusetts, Rhode Island)
Thelma Hamilton, Municipal Evaluation Section (WMC), Water Management Division, U.S. EPA—Region I, JFK Federal Building, Boston, MA 02203, Phone: (617) 565–3569.

Region 2

(New York, New Jersey, Puerto Rico, Virgin Islands)
Alia Roufaeal, Water Management Division, U.S. EPA—Region II, 26 Federal Plaza, room 837, New York, NY 10278, Phone: (212) 264–8663.

Region 3

(Delaware, Virginia, West Virginia, District of Columbia, Maryland, Pennsylvania)
Ann Carkhuff, Permits Enforcement Branch, Water Management Division (3WM55), U.S. EPA—Region III, 841 Chestnut Street, Philadelphia, PA 19107, Phone: (215) 597–9406.

Region 4

(Alabama, Florida, Georgia, Kentucky, Mississippi, Tennessee, North Carolina, South Carolina)
Vince Miller, Municipal Facilities Branch, Water Management Division, U.S. EPA—Region IV, 345 Courtland Street, Atlanta, GA 30365, Phone: (404) 347–2391.

Region 5

(Indiana, Illinois, Michigan, Wisconsin, Ohio, Minnesota)
John Colletti, Water Quality Branch, Water Division (5WQP–16J), U.S. EPA—Region V, 77 West Jackson Boulevard, Chicago, IL 60604–3590, Phone: (312) 886–6106.

Region 6

(Arkansas, Louisiana, New Mexico, Oklahoma, Texas)
Stephanie Kordzi, Water Management Division (6–WPM), U.S. EPA—Region VI, 1445 Ross Avenue, 12th Floor, suite 1200, Dallas, TX 75202–2733, Phone: (214) 655–7520.

Region 7

(Iowa, Kansas, Missouri, Nebraska)
John Dunn, Water Compliance Branch, Water Management Division, U.S. EPA—Region VII, 726 Minnesota Avenue, Kansas City, KS 66101, Phone: (913) 551–7594.

Region 8

(Wyoming, Utah, North Dakota, South Dakota, Colorado, Montana)
Bob Brobst, NPDES Branch (8WM–C), Water Management Division, U.S. EPA—Region VIII, 999–18th Street, Denver Place—suite 500, Denver, CO 80202–2405, Phone: (303) 293–1627.

Region 9

(California, Nevada, Arizona, Hawaii, Guam, American Samoa, North Mariana Islands, Pacific Trust Territories)
Lauren Fondahl, Pretreatment Section (W–5–2), Water Management Division, U.S. EPA—Region IX, 75 Hawthorne Street, San Francisco, CA 94105, Phone: (415) 744–1909.

Region 10

(Oregon, Washington, Idaho, Alaska)
Technology/Standards Questions:
Dick Hetherington, Water Permits Section (WD–134), Water Management Division, U.S. EPA—Region X, 1200 6th Avenue, Seattle, WA 98101, Phone: (206) 553–1941.
Permit Questions:

Laura Felten, Water Permits Section (WD–134), Water Management Division, U.S. EPA—Region X, 1200 6th Avenue, Seattle, WA 98101, Phone: (206) 553–1647.

[FR Doc. 93–3 Filed 2–18–93; 8:45 am]

BILLING CODE 6560-50-M

federal register

Friday
February 19, 1993

Part III

Department of Labor

Office of Labor Management Standards

29 CFR Parts 402 and 403
Labor Organization Annual Financial Reports and Abbreviated Annual Financial Reports for Small Labor Organizations; Proposed Rule

DEPARTMENT OF LABOR

Office of Labor-Management Standards

29 CFR Parts 402 and 403

Labor Organization Annual Financial Reports and Abbreviated Annual Financial Reports for Small Labor Organizations

AGENCY: Office of Labor-Management Standards, Employment Standards Administration, Labor.

ACTION: Proposed extension of the effective date of final rules.

SUMMARY: The Office of Labor-Management Standards of the Employment Standards Administration is proposing to extend the effective date of the regulations pertaining to labor organizations' filing of annual financial reports required by the Labor-Management Reporting and Disclosure Act of 1959 (hereinafter the LMRDA). The final rules, published in the **Federal Register** on October 30, 1992, revised United States Department of Labor Forms LM–2 and LM–3 and issued the new Form LM–4.

The effective date of these final rules is December 31, 1993. Covered labor organizations filing financial reports for fiscal years beginning January 1, 1993, and thereafter would be required to use the newly revised Form LM–2 or LM–3, or the new Form LM–4. Because of problems encountered by labor organizations and the Department in connection with efforts to implement the revised reporting forms and because further study of the revisions may be necessary, the Office of Labor-Management Standards requests comments concerning the advisability of extending the December 31, 1993 effective date until December 31, 1994. If the effective date were extended, labor organizations filing financial reports for fiscal years ending before December 31, 1994 would continue to file their reports on the preexisting Form LM–2 or LM–3.

DATES: Interested parties may submit written comments on this proposal. All comments must be submitted by March 22, 1993.

ADDRESSES: Written comments should be submitted to John Kotch, Acting Director, Office of Labor-Management Standards, Employment Standards Administration, U.S. Department of Labor, 200 Constitution Avenue NW., room N–5605, Washington, DC 20210.

FOR FURTHER INFORMATION CONTACT: Kay H. Oshel, Chief, Division of Interpretations and Standards, Office of Labor-Management Standards, Employment Standards Administration, U.S. Department of Labor, 200 Constitution Avenue NW., room N–5605, Washington, DC 20210, (202) 219–7373. This is not a toll-free number.

SUPPLEMENTARY INFORMATION: Section 201(b) of the LMRDA (Pub.L. 86–257, 73 Stat. 519 (29 U.S.C. 401 *et seq.*)) requires each covered labor organization to file annually with the Secretary of Labor a financial report containing "information in such detail as may be necessary accurately to disclose its financial condition and operations for its preceding fiscal year." Section 208 of the LMRDA authorizes the Secretary to issue, amend, and rescind rules and regulations prescribing the form and publication of the annual financial reports and prescribing simplified reports for labor organizations for whom he finds that by virtue of their size a detailed report would be unduly burdensome.

Pursuant to this authority, the Secretary promulgated the regulations at 29 CFR parts 402 and 403, which require labor organizations to file either the detailed Form LM–2 or, for labor organizations with annual receipts totalling less than $100,000, the simplified Form LM–3. On October 30, 1992, the Secretary published final rules that revised Forms LM–2 and LM–3, added new Form LM–4, and amended 29 CFR parts 402 and 403 accordingly (57 FR 49282 and 49356). The effective date of these final rules is December 31, 1993, making them applicable to financial reports filed for fiscal years ending on or after that date.

The revised financial reporting Forms LM–2 and LM–3 add a requirement that labor organizations report expenditures by functional categories. Since such annual financial reports disclose details of each labor organization's financial condition and operations for the preceding year, labor organizations filing reports for fiscal years ending on or after the December 31, 1993 effective date would have to begin maintaining the required information on or shortly after the beginning of their fiscal year, which for the majority of labor organizations begins on January 1, 1993. The revisions to Forms LM–2 and LM–3 will also require many labor organizations to modify their recordkeeping systems in order to collect and report the required information. The effective date of the final rule thus compelled labor organizations to begin implementing new procedures as early as January 1, 1993 only two months after the publication of the final rules on October 30, 1992.

The changes in reporting categories required by the final rule were opposed in comments filed in response to the notice of proposed rulemaking by numerous labor organizations and accounting firms familiar with the financial reporting practices of the reporting organizations. In addition to indicating that the proposed changes would impose substantial costs without compensating benefits in terms of improved financial disclosure, all but one of the comments concerning an effective date for the new reporting forms stated that lead time of less than one year would be insufficient to enable labor organizations to establish and operate new accounting systems needed to comply with the proposed functional reporting requirements.

The Department has continued to receive such comments from labor organizations and accounting firms making inquiries regarding the interpretation or application of the new rules.

Such comments apparently arise not only from officials with limited accounting experience but also experienced officials and their professional advisors, suggesting that those who must prepare and file the new forms are experiencing difficulties in attempting to comply with the new requirements. The short time period for implementation also has made it more difficult than anticipated for the Department to sufficiently prepare its own staff to respond adequately to labor organizations' inquiries and to develop educational material for the guidance of reporting labor organizations.

Reexamination of the comments the Department received on proposed effective dates for the functional reporting requirements, the Department's own difficulties in being able to adequately respond to labor organizations' inquiries regarding the final rule, and labor organizations' continuing difficulties in preparing to comply with the new functional reporting requirements lead the Department to propose extending the effective date of the final rule until December 31, 1994. The purpose of the extension is to alleviate these compliance problems and allow for reevaluation of these new rules, including whether modification or rescission of some or all of the revisions may be appropriate.

The two final rules promulgated on October 30, 1992 also raised the annual receipts ceiling for use of the simplified Form LM–3 from $100,000 to $200,000 and issued a new abbreviated Form LM-

4 for use by small labor organizations with total annual receipts of less than $10,000. The regulations at 29 CFR 403.4 were amended to incorporate these two changes. Further, due to changes on item numbers on the revised forms, 29 CFR 402.4 was amended to refer to item 22 on revised Forms LM–2 and LM–3 instead of item 18 on the LM–3 and item 20 on Form LM–2. The final rules also permitted labor organizations to report on either a cash or accrual basis depending on how their records are maintained. These revisions have not created as many difficulties in their implementation; nonetheless, in order to avoid confusion that may result if portions of the October 30, 1992 rules were effective on December 31, 1993, while other portions were effective on December 31, 1994, the Department proposes to extend the effective date for both rules in their entirety.

Administrative Requirements

E.O. 12291

This rule does not constitute a "major rule" under E.O. 12291 in that it is not likely to result in an annual effect on the economy of $100 million or more; a major increase in costs or prices; or significant adverse effects on competition in the marketplace. Consequently, no regulatory impact analysis has been prepared or is necessary.

Regulatory Flexibility Act

In accordance with section 605(b) of the Regulatory Flexibility Act, 5 U.S.C. 601 et seq., the Agency Head certifies that this rule will not have a significant economic impact on a substantial number of small entities. This rule will only apply to labor organizations and the Department has determined that labor organizations regulated pursuant to the statutory authority granted under the LMRDA do not constitute small entities. Therefore, a regulatory flexibility analysis is not required.

Paperwork Reduction Act

The proposed extension of the effective date of the subject final rules will result in a one-year continuation of the pre-existing labor organization reporting requirements. It will not result in any new collection of information requirement; therefore, it is not subject to section 3504(h) of the Paperwork Reduction Act, 44 U.S.C. 3504(h).

List of Subjects in 29 CFR Parts 402 and 403

Labor unions, Reporting and recordkeeping requirements.

Extension of Effective Date of Final Rules

In consideration of the foregoing, the Department of Labor proposes that the effective date for the final rules published in the **Federal Register** on October 30, 1992, 57 FR 49282 and 49356, which revised United States Department of Labor Forms LM–2 and LM–3, issued Form LM–4, and amended 29 CFR parts 402 and 403, be extended from December 31, 1993 until December 31, 1994.

Signed in Washington, DC, this 12th day of February, 1993.

Robert B. Reich,

Secretary of Labor.

John R. Fraser,

Acting Assistant Secretary for Employment Standards.

[FR Doc. 93–3862 Filed 2–16–93; 11:14 am]

BILLING CODE [illegible]

federal register

Friday
February 19, 1993

Part IV

Department of Education

Office of Special Education and Rehabilitative Services

National Institute on Disability and Rehabilitation Research; Notice Inviting Applications for New Awards Under Certain Programs for Fiscal Year 1993

DEPARTMENT OF EDUCATION

Office of Special Education and Rehabilitative Services

[CFDA No. 84.133B]

National Institute on Disability and Rehabilitation Research; Notice Inviting Applications for New Awards Under Certain Programs for Fiscal Year (FY) 1993

AGENCY: Department of Education.

ACTION: Correction notice.

SUMMARY: On January 21, 1993 a notice inviting applications for new awards under certain programs for fiscal year 1993 was published in the **Federal Register** at 58 FR 5535. This notice corrects the deadline for transmittal of applications, available funds, and estimated average size of awards.

On page 5537, second column, lines five through nine are corrected to read as follows:

Deadline for Transmittal of Applications: March 24, 1993.
Available Funds: $7,450,000.
Estimated Average Size of Awards: $600,000–$650,000.

FOR FURTHER INFORMATION CONTACT: Yvonne Fleming, U.S. Department of Education, 400 Maryland Avenue SW., room 3418, Switzer Building, Washington, DC 20202–2572. Telephone (202) 205–8532. Deaf and hearing impaired individuals may call (202) 205–5516 for TDD services.

Authority: 29 U.S.C. 760–761.

Dated: February 11, 1993.

William L. Smith,

Acting Assistant Secretary, Office of Special Education and Rehabilitative Services.

[FR Doc. 93–3841 Filed 2–18–93; 8:45 am]

BILLING CODE 4000–01–M

federal register

Friday
February 19, 1993

Part V

Department of Energy

Office of Conservation and Renewable Energy

10 CFR Part 455

Grant Programs for Schools and Hospitals and Buildings Owned by Units of Local Governments and Public Care Institutions; Final Rule

DEPARTMENT OF ENERGY

Office of Conservation and Renewable Energy

10 CFR Part 455

[Docket No. CE-RM-91-130]

Grant Programs for Schools and Hospitals and Buildings Owned by Units of Local Government and Public Care Institutions

AGENCY: Office of Conservation and Renewable Energy, Department of Energy.

ACTION: Final rule.

SUMMARY: Today the Department of Energy (DOE) is publishing a final rule revising the regulations for its Grant Programs for Schools and Hospitals and for Buildings Owned by Units of Local Government and Public Care Institutions, also known as the Institutional Conservation Program (program, Institutional Conservation Program, or ICP). The program provides grants to institutions to fund detailed energy audits, called technical assistance programs (TAs), and energy conservation measures (ECMs). The purpose of the revisions is to provide States and institutional grantees more specific guidance in some areas of program operation and more flexibility in other areas. The revisions are also intended to improve the DOE ability to assist States, institutions, and other interested parties in improving energy efficiency, reducing energy costs, and leveraging available resources. In a number of cases, the revisions reflect changes to the program made by the State Energy Efficiency Programs Improvement Act of 1990 (Pub. L. 101-440)

EFFECTIVE DATE: March 22, 1993.

FOR FURTHER INFORMATION CONTACT: Thomas P. Stapp, U.S. Department of Energy, Institutional Conservation Program, Office of Conservation and Renewable Energy, CE-531, Forrestal Building, 1000 Independence Avenue, SW, Washington, D.C. 20585, (202) 586-2096.

SUPPLEMENTARY INFORMATION:

I. Introduction and Description of the Program
II. Revisions to the Regulations
III. Review Under Executive Order 12291
IV. Review Under Executive Order 12778
V. Review Under the Regulatory Flexibility Act
VI. Review Under the Paperwork Reduction Act
VII. Review Under National Environmental Policy Act
VIII. Review Under Executive Order 12612
IX. Review Under the Federal Energy Administration Act
X. Catalog of Federal Domestic Assistance

I. Introduction and Description of the Program

The Department of Energy (DOE or Department) has revised the program regulations for the Institutional Conservation Program, 10 CFR part 455, authorized by title III of the Energy Policy and Conservation Act, as amended, (the Act) 42 U.S.C. 6371 et seq. The program is subject to the general DOE Assistance Regulations at 10 CFR part 600 which are cross-referenced in 10 CFR part 455 and sometimes discussed in this preamble.

The Act established a primary goal for the program of reducing energy use and costs in institutional buildings. To accomplish this goal, it authorized DOE to establish cost-shared energy conservation grant programs to fund TAs in public and private non-profit schools, hospitals, and buildings owned by units of local government and public care institutions and to fund the purchase and installation of ECMs in schools and hospitals.

Among other things, the TAs are used to identify changes in maintenance and operating procedures and new equipment or materials that could conserve energy in eligible buildings. Implementation of the maintenance and operating procedures and installation of the new ECMs contribute to energy conservation in the building where they are used.

The purpose of today's notice is to improve the operation and flexibility of the Institutional Conservation Program. The Department has based this notice on its experience in administering the program since fiscal year 1979, questions raised and suggestions made by participants in the program, and amendments to the Act by the State Energy Efficiency Programs Improvement Act of 1990 (Pub.L. 101-440) (1990 legislation). Other areas of program administration require revision due to evolution of the program. DOE has rearranged a number of the subparts to the rule and added some new subparts and new sections to provide a more logical sequence and to make the rule easier to use. DOE has also made a number of minor technical or grammatical corrections.

Another objective of today's rule is to facilitate the leveraging of ICP funds by encouraging States and institutions to identify additional sources of non-Federal funding for energy efficiency improvements and to obtain funding from those sources where feasible. Since ICP funding is limited, it is important that States and institutions utilize non-grant funding sources whenever possible. Finally, DOE believes that improved and more flexible regulations will have a positive influence on energy efficiency efforts.

II. Revisions to the Regulations

The principal revisions being made in this action are: Reorganizing the rule in more logical order and adding new sections and headings for clarity; redefining "building" to cover groups of structures that are centrally metered or are served by a central utility plant; changing the building eligibility date to May 1, 1989; simplifying the requirements for an energy audit; allowing demand-shifting ECMs if they do not use more energy than was used before their installation; adding definitions and other regulatory provisions for optional new grants to States for technical assistance, program assistance, and marketing; deleting the exclusion of educational agency administration buildings from eligibility; providing for various new or changed requirements that States must address in their State Plans or have the option to address; allowing States to specify the conversion factors to be used for various types of energy conservation measures involving changes in the use of electricity; incorporating into the rule the DOE deobligation/reobligation policy for various types of situations; deleting the requirement that TAs be long-term planning documents and allowing States to limit the range and types of ECMs to be considered in TAs (which are based on energy audits that meet the requirements of the rule) for particular types of buildings; encouraging States to use life-cycle costing procedures in the analysis and ranking of ECM applications, while permitting the continued use of simple payback if a State elects to do so; and adding regulatory provisions for States that want to use life-cycle costing.

Further revisions in this action are: Raising the upper limit on the cost effectiveness of eligible ECMs to 15 years if life-cycle costing is used; changing the calculation procedures for conversions to coal and renewables; revising hardship criteria to concentrate on financial need; raising the State administrative grant maximum base amount to $50,000 and eliminating the matching requirement for these grants; providing for administrative grants from appropriated funds where States fund ECMs from non-Federal sources; requiring a State to offer regular ICP grants to eligible religious institutions if such institutions would be ineligible for the non-Federal ECM funding due to

State constitutional prohibitions on providing State aid to religious institutions; providing for allowance of liens on grant-funded equipment where the matching contribution is borrowed, and requiring that DOE be notified if a lender sues to repossess the equipment; providing States the option of allowing applications for credit toward the grantee's share of the cost of ECMs; allowing States the option of permitting new grant applications for TAs and ECMs that were included in previous cycle grants but for which funds were never expended; providing for a sample energy use report, using a representative sampling technique, to replace the current requirement that all grantees file such reports; and allowing rebates to be used for the grantees' matching contribution up to specified limits.

Proposed Changes to Each Section, Comments Received, and the DOE Final Action

The following discussion describes the DOE proposed change(s) to each section, comments received regarding those proposed changes, and the DOE final action.

List of Subparts and Sections

DOE proposed rearranging the subparts to improve the organization and comprehensibility of the program regulations. Three favorable, and no unfavorable, comments were received on this change, and DOE has finalized the changes as proposed. A comparative listing of the old and new subparts was included in the discussion of proposed changes in the Notice of Proposed Rulemaking (NOPR) published in the **Federal Register** on January 6, 1992 (57 FR 433).

Section 455.2 Definitions

DOE proposed revising the definition of "building" to change the eligibility date to May 1, 1989, and to permit a group of structural units served by a central utility plant and centrally metered to be considered a "building." Several commenters liked the changes as proposed. Other commenters asked DOE to provide the States with additional flexibility so that, for instance, groups of structures which are connected by covered walkways, or which can be served by a single ECM, as well as structures served either by a central utility plant or by a central meter, could be considered "buildings." DOE is changing the definition to provide for structures served either by a central meter or by a central utility plant but is not going any further because DOE believes that structures not so connected cannot be considered buildings based on the definition in the Act.

DOE proposed revising the definition of "complex" to delete the reference to a central utility plant, which was added to the definition of building. One commenter wanted the old definition restored. DOE believes the revised definition, which covers a closely situated group of buildings, is sufficiently broad to include those that are, or are not, served by central utility plants, and DOE is not changing the definition. States now have considerable latitude via their State Plans to decide when and to what extent TAs need to cover groups of structures in various configurations.

DOE proposed revising the definition of "coordinating agency" to clarify that a State, as well as a private, non-profit entity, may serve in this role consistent with State laws and regulations. Six comments supported the proposed revision, and DOE is adopting this change as proposed. Two commenters said coordinating agencies should be able to serve in that capacity for either TA applications or ECM applications, or both. DOE agrees. One commenter objected to States that serve in this role hiring TA analysts or doing the TAs with State employees. Subject to State law, that decision, with respect to public institutions, is up to each State entity which serves as a coordinating agency. With respect to private, non-profit institutions, that decision could be made by a public coordinating agency with the acquiescence of those institutions.

DOE proposed revising the definition of "energy audit" (EA) to delete the reference to former § 455.19 (which DOE proposed to drop from the rule) and to add wording which reflects the definition in the Act. Five commenters supported this change and none opposed it. The final version of the definition tracks the proposed version with one significant addition. That addition ties the definition to the energy audit content requirements of 10 CFR 450.43, if the audit is conducted with financial assistance under 10 CFR part 455. This addition is necessitated by section 400B of the Act, 42 U.S.C. 6372 a, which requires DOE guidelines (codified at 10 CFR 450.43 and former § 455.19) for the conduct of energy audits with DOE financial assistance. However, since Congress has not provided appropriations for energy audits for many years and is not expected to do so in the future, this addition is not expected to be a significant set of binding requirements for such audits.

DOE did not propose revising the definition of energy conservation maintenance and operating procedures, but a commenter pointed out that by dropping former § 455.19, the rule no longer had a list of examples of such procedures. DOE has, therefore, added the list of examples of these procedures, included in former § 455.19, to the definition in § 455.2. This list of examples is not intended to be an exhaustive one but includes many examples of what DOE considers to be energy conservation maintenance and operating procedures (as distinct from ECMs). The distinction is an important one, and DOE believes having this list of examples in the rule helps clarify the differences.

DOE proposed revising the definition of "energy conservation measure" to reflect statutory amendments. One commenter felt it would help clarify the definition to add a reference to load management systems after the word "maintain," which DOE has done. Such systems are the only types of ECMs which are allowed to simply maintain energy consumption (others must save energy or, as discussed later, provide for conversion to a renewable source of energy). A number of commenters suggested that the definition should be broadened to include types of load management systems or other measures which cause more energy to be used than before their installation but which save money. DOE believes the legislative intent was clear that, at the very least, such ECMs must maintain energy usage to qualify, and DOE has not changed that requirement. One commenter asked if the comment in the preamble to the NOPR (57 FR 434, 1st column) relating to fuel switching meant that no ECMs designed to allow different fuels to be used were eligible. DOE intended this to refer to ECMs that do not achieve energy savings. Consistent with applicable U.S. House of Representatives report language, DOE does not interpret the revised definition to cover fuel switching that does not save energy. House Report No. 101–646, 101st Congress, 2nd Session 15 (1990), reprinted in 1990 U.S. Code Congressional and Administrative News 1656. However, ECMs that involve a cost-effective change in fuels (which would require the achievement of appropriate energy and cost savings, as discussed later) are eligible.

DOE also proposed revising new subsection (10) (old subsection (i)) under the definition of "energy conservation measure" to add, as an example of an eligible ECM, replacement or modification of exterior lights that are physically attached or

connected to an eligible building. Many commenters favored the proposed change, and none opposed it. However, almost all the commenters on this subject asked that the example be broadened to include additional exterior lights such as those in parking lots and stadiums if the institution paid the utility bills for those lights. DOE believes that exterior lights not attached or connected to "any structure * * * which includes a heating or cooling system or both" cannot be considered eligible ECMs because they are not part of a "building" as defined by section 391(1) of the Act, 42 U.S.C. 6371 (1).

DOE proposed deleting the definition of "energy use evaluation" (EUE) because the requirements for energy audits were being made more flexible. The feeling was that, with the States now being able to do simpler EAs, the EUE option would not be needed. One State asked that the definition of EUE be restored because the EUE requirements spelled out in former § 455.20 did not include looking at maintenance and operating procedures, while even the more flexible new EA requirements included a review of such procedures. DOE believes that it would be preferable to review such procedures prior to undertaking a TA in order to eliminate obviously unnecessary ECMs before incurring the expense of a TA. However, since 1985 DOE has interpreted and implemented the Act to allow such an undertaking without that prior review. There does not seem to be a compelling reason to alter that policy. DOE has decided therefore to restore a definition of EUE which includes the EUE elements set forth in former § 455.20.

Although DOE did not propose revising the definition of "hospital," one commenter asked that the definition be expanded to include rehabilitation hospitals that are not domiciliary or long-term care institutions. DOE believes the current definition allows for such hospitals under the conditions specified, and has not added them to the definition. As in other places in the definitions, an attempt has been made to include examples of allowable hospitals, but those examples are not intended either to cover all the possibilities or to exclude everything that is not mentioned.

DOE proposed adding a definition of "load management system" to provide for this type of equipment, newly allowable under the 1990 legislation. Comments on this change have already been discussed under "energy conservation measure," and DOE has adopted the change as proposed.

DOE proposed adding a definition for "marketing" to provide for this new type of State grant activity made allowable, under certain circumstances, by the 1990 legislation. One commenter suggested that the definition be broadened to allow activities "managed or performed" by the State (not just managed by the State). DOE agrees, and has added this wording to the definition. The intent here is to make clear that the State is responsible for the activities under this type of grant regardless of whether the State uses outside resources or State personnel to accomplish them.

Five commenters asked that the definition of "marketing" be broadened to include activities such as site visits to schools and hospitals and preparing articles about energy conservation. The proposed definition was based on the 1990 legislation which says "marketing and other costs associated with leveraging of non-Federal funds for carrying out this part." DOE has revised the proposed definition to include marketing activities specifically mentioned in the Senate and House reports on the 1990 legislation. The revision includes some types of site visits and articles. States must keep in mind, however, that they will need to report on their marketing program grant in terms of ultimate results—which means they need to assure that non-Federal financing is identified, made available to, and used by eligible institutions as part of their marketing program.

Several commenters suggested that a new definition be added for "non-Federal funds" relating to the new types of grants provided for under the 1990 legislation. Such non-Federal funds must be identified and used for ECMs in order for States to qualify for new grants for technical assistance, program assistance, and/or marketing. DOE believes this is a good idea and has added such a definition.

A number of commenters inquired about the types of funds that might be allowable under the definition of non-Federal funds. A State receiving a grant for marketing must be able to document that the marketing grant it received from DOE was used to identify and make available these non-Federal funds (whether they are direct State funds such as loans from the State, or funds from State-issued bonds, or funding sources the State has identified and arranged for in the public or private sector, such as funds from utilities or banks). Funds obtained by the State from the petroleum violation escrow settlements which are considered as non-Federal, such as those from the Stripper Well and Diamond Shamrock settlements, would qualify as non-Federal funds. Petroleum violation escrow funds which are required by statutes, court orders or settlement agreements to be treated as Federal funds (e.g., those under the court order in *U.S. v. Exxon Corp.*, 561 F.Supp. 816 (D.D.C. 1983) and those available due to the Warner Amendment, 96 Stat. 1830, 1919 (1982)) do not qualify as non-Federal funds for this purpose. Funds obtained by institutions without the assistance of the State program also do not qualify as non-Federal funds for the purposes of programs under § 455.20(j).

DOE proposed deleting the definition of "operations office manager" and to add a definition of "support office director" to reflect the realignment of the DOE Field Offices. There were no comments on these changes, and DOE has adopted them as proposed.

DOE proposed adding a definition of "program assistance" to provide for this new type of State grant activity made allowable, under certain circumstances, by the 1990 legislation. As discussed under the new definition of marketing, one commenter suggested adding that the activity can be managed or performed by the State. DOE agrees and has made this change. Several commenters suggested that more examples of allowable activities be provided such as in-depth reviews of TAs or maintenance and operating procedure training. As mentioned earlier, DOE does not intend definitional examples to be all-inclusive or to exclude all activities not mentioned, but DOE has added to the definition some clarifying language to cover TA reports and maintenance and operating procedure training. Beyond those clarifications, DOE believes the States have considerable flexibility to design these programs to help their institutions identify and achieve their energy efficiency goals.

DOE proposed revising the definition of "school facilities" by adding administrative facilities newly allowable due to the 1990 legislation. There were no negative comments on this change, and DOE has adopted it as proposed. DOE received several comments asking that administrative facilities be added elsewhere in the rule (such as under the definition of "school"). DOE believes that including it under school facilities is sufficient and has, therefore, not added this term elsewhere as an additional example.

One commenter suggested that the definition of "technical assistance" be broadened to provide for State-performed TAs. Subject to State law, a State can do, or arrange for, TAs either as a coordinating agency or under the new grants provided for by the 1990

legislation. DOE believes the current definition does not preclude State-performed TAs and has, therefore, not changed the definition.

Several commenters suggested that DOE add a definition for "technical assistance program update," since DOE has allowed States the option of providing credit for these. DOE agrees and has added this new definition. As the definition states, such updates are intended to be brief documents designed to provide current information on ECMs being proposed for funding. Updates should not be extensive or total revisions to existing TAs. (States will need to spell out their requirements for TA updates in their State Plans.)

Section 455.20 Contents of State Plan

DOE proposed a number of revisions to this section. The first three changes—revising the introductory wording to provide for new State grants for technical assistance, program assistance and marketing; adding a new paragraph (c) requiring States to set forth their procedures for notifying eligible institutions of funding availability each cycle; and deleting the former paragraph which required States to include results from PEAs—generated no comments (in the case of the first two) or only positive comments (in the case of the third), and DOE has adopted them as proposed.

One commenter asked that DOE waive the requirement that States solicit the views of eligible institutions if the State is required to amend the plan (such as due to a rule change). DOE believes that it is important for eligible institutions to be aware of such pending State Plan changes and that the State seek input from them when amending the State Plan. Therefore, DOE has not changed this requirement.

A number of commenters raised questions about paragraph (e) relating to ranking grant applications, pointing out that, if the States use a continuous cycle (provided for by the 1990 legislation for States that receive a grant from DOE for TAs), they would not be able to rank applications. In fact, DOE states in § 455.92(c) that ranking is not required for these grants.

DOE proposed adding a new paragraph (j) requiring a State to describe its programs for technical assistance, program assistance, marketing and non-Federally funded ECMs if the State elects to apply for these new grants provided for by the 1990 legislation. Several questions were raised about the requirements set forth in this paragraph, such as how States can assure that institutions that receive TAs or participate in program assistance and marketing activities under these grants later benefit from the State's program to fund ECMs from non-Federal sources, and how States can assure equitable availability/distribution of funds.

DOE believes that States need to design realistic programs for TAs, marketing and program assistance so that participants have a reasonable expectation of going on to the next logical step. For institutions that participate in the TA and/or marketing programs, the next step ought to be getting ECMs implemented with non-Federal funds. This may not happen in all cases, but States should work toward achieving that goal. DOE does not believe there is a single way to accomplish this and is not mandating one. But States need to avoid setting up programs that neglect or entirely miss segments of the eligible institutions (such as using all their appropriated funds for programs that assist only schools or only hospitals or targeting the non-Federal funds that way). States may receive useful feedback on this from their eligible institutions when they seek it pursuant to paragraph (a) of this section.

DOE proposed revising paragraph (k) to require States to describe their requirements for an EA that is to be used as a basis for a TA grant application. Four commenters viewed this change favorably (although one, as previously described, wanted the EUE option restored), and none opposed it. Consistent with the discussion above, the final version of paragraph (k) refers to the EUE option. Accordingly, the wording of this paragraph has been revised to delete the suggestion that the EA is an indispensable basis for a TA grant application.

One commenter suggested that States be able to decide what, of the information formerly required in the EAs, should be included in the new EAs. If DOE does not provide financial assistance for an EA, States have some discretion to specify EA elements. However, that discretion is subject to the minimum requirements in the statutory definition of an EA which is repeated in § 455.2. DOE has also added to paragraph (k) a requirement that States describe in their State Plans the qualifications needed for auditors who perform EAs and persons performing EUEs in the State. EAs or EUEs should be considered important first steps for institutions considering energy conservation improvements, and DOE wants to encourage development of State policies to ensure adequate quality.

DOE proposed revising paragraph (l) to simplify the maintenance and operating procedure provisions in the State Plan. One comment was received regarding this change, and it was positive. DOE has, therefore, adopted this change as proposed.

DOE proposed revising paragraph (m) to provide more specific examples of actions States might take to assure that financial assistance under this part supplements, but does not supplant, other available sources of funding. Several commenters objected to these revisions, suggesting that it would be too difficult to implement or it was too restrictive. DOE believes it is very important for States—and institutions—to investigate other possible funding sources before considering ICP grants, and DOE has consequently retained the revised wording. Several commenters suggested that States be allowed, pursuant to this paragraph, to exclude from eligibility certain ECMs that are being funded by other sources in the State (for instance, lighting improvements being funded by utilities), or to require that ICP grant applicants first seek other available sources of funding. DOE agrees and has added a third subparagraph to paragraph (m) to provide for any limitations States might elect to place on applicants because of other sources of funding that are available in the State. However, States should have a program to help eligible institutions identify and obtain such funding.

DOE proposed revising paragraph (o) to allow States the flexibility to establish requirements for TAs done in the State, including the option of varying the requirements depending upon the type, size, location, etc., of particular buildings. A few commenters objected to this revision because they felt the former requirement that all TAs be long-term planning documents based on extensive reviews of all buildings was still valid. Far more commenters felt the change would be helpful. DOE understands the concerns of those who want the TAs to continue to be complete reviews of buildings, and has allowed a State to continue requiring such a review if the State elects to do so. But DOE believes it is also valid to offer States the option of designing TAs for different building types, omitting detailed long-term plans, if appropriate.

In response to several comments, DOE has added to paragraph (o) a provision for States to specify situations where particular ECMs may, or may not, be considered appropriate for particular types of buildings or groups of structures that qualify as a building. A number of commenters pointed out that no matter how "building" is defined, some groups of structures might not

logically fit into a single TA even if they met the definition, and some ECMs might require special treatment in TAs under certain circumstances. DOE believes it is a good idea to allow States considerable flexibility in this regard.

In commenting on proposed paragraph (o), several commenters felt States should be able to dispense with TAs altogether if a single ECM is wanted or to limit TAs to a single targeted ECM. It is inappropriate to dispense with TAs because EUEs do not examine operation and maintenance changes and neither EUEs nor EAs require a cost effectiveness test. Furthermore, if a TA or the EA or EUE on which a TA is based do not examine a reasonable selection of ECM possibilities in light of the size and type of building, the TA may be inadequate to be eligible under § 455.71 which sets forth the eligibility requirements for an ECM grant application.

DOE proposed revising paragraph (q) to provide for a specification by a State of when an updated TA will be required. The comments were all favorable on this change, but several commenters suggested that the States also need to specify the required scope and contents of such TA updates. DOE agrees and has added this language to the paragraph which is being adopted as proposed with this revision added. As covered in the new definition of a TA update, these are intended to be brief revisions of particular data in existing TAs, not extensive or total revisions of entire documents.

DOE did not propose revising paragraph (r), but a number of commenters objected to this paragraph, with its prohibition on TA analysts having financial conflicts of interest (such as an interest in the ECMs which are installed after the TA is done). Some firms that install ECMs want to do their own TAs because they do not feel they should be held to estimates in TAs done by others, particularly if a guarantee of the savings is involved. DOE considered this issue, but decided that it was in the best interests of the program to retain the prohibition on conflict of interest. This decision was based both on the DOE conviction that independent TAs are the foundation of an effective ICP and on the provisions under 10 CFR 600.436(b)(3)(iv) and Office of Management and Budget Circular A–110 Attachment (O), section (b)(3), which stress the importance of avoiding real, apparent, or potential conflicts of interest where Federal grants are providing funding for projects (such as those undertaken by ICP grantees).

DOE proposed adding a new paragraph (s) to allow a State to specify whether it would accept applications for ECMs which had been included in previous grant awards but for which funds were never expended. Five commenters approved of this change and no one opposed it, but two commenters asked that TAs be added if they had been similarly included in a previous grant award but not done. DOE agrees that this would be reasonable and has, therefore, adopted this revision with that change.

DOE proposed revising paragraph (u)(1) to require that States use only 3,413 as the factor in conversion of kilowatt hours to Btus to ensure consistency. Many comments were received on this proposed change, 23 of 24 of which were opposed to the change. The primary objection was that it would have the effect of precluding consideration of some cogeneration projects and some conversions from electricity to other energy sources because such projects and conversions would not show energy savings if 3,413 were used. Some commenters asked DOE to retain the current option of using either 3,413 or 11,600, while others suggested that States be allowed to select whatever factors they felt appropriate for the particular measure and utility involved.

With regard to the conversion of kilowatt hours, DOE has decided to allow States the option of using either 3,413 or 11,600 for all of the ECMs reviewed in the State, or to use 3,413 for certain types of ECMs, and 11,600 for other types of ECMs. Where two factors are used, the State must specify the particular factor to be used for each type of ECM and must cite the source for the decision. There should be a valid basis for assigning a particular factor to a particular type of ECM, and States must apply each factor consistently once it has been assigned. DOE did not intend to preclude the funding of particular ECMs when it proposed the change and hopes the revision to the change discussed here will allow States the flexibility to evaluate all ECMs in an equitable manner.

DOE proposed adding a new subparagraph (u)(2) to allow States to select either simple payback or life-cycle costing as their cost-effectiveness testing approach for TAs. Several commenters felt the life-cycle costing approach was inappropriate to ICP (too complicated, too costly to do, too difficult to project costs, etc.), but the majority of the commenters felt it was worthwhile to offer the option. A few commenters suggested that DOE allow States to use simple payback for some ECMs and life-cycle costing for others. DOE does not believe there is any practical way to have two different cost-effectiveness tests used in a State at the same time and has not made that change.

Other commenters asked if States could use their own discount and fuel price escalation rates and other variables. DOE had always intended that States have some discretion to use their own factors for such data as discount and fuel cost escalation rates, and DOE has added language providing for that limited discretion in subparagraph (u)(2), subject to the limits specified in § 455.64(g)—namely, that the discount rate must equal or exceed that calculated under 10 CFR part 436, and the energy cost escalation rates may not exceed those calculated under 10 CFR part 436. DOE also requires a State to describe the procedures it intends to require for life-cycle cost analyses in the State including any limits a State elects to place on the degree to which non-energy cost savings can be used in life-cycle cost calculations. (Corresponding changes are being made to § 455.64, which will be discussed later.) DOE will make available annually tables, by DOE region, which set forth present worth factors which reflect the DOE discount and energy cost escalation rates.

DOE believes that life-cycle costing (LCC) is a more thorough method of determining the relative cost-effectiveness of ECMs than simple payback and, consequently, has provided this option in the final rule and encourages its use by States. The most important elements of life-cycle costing are the explicit consideration of cost savings over the full life of the ECM and the discounting of these savings to present value. The most appropriate way to display the results of such an analysis in the ranking of ECM applications is in the form of savings-to-investment ratios. States that wish to use life-cycle costing in the ranking of ECM applications will have to establish procedures for institutions to follow, but DOE will permit States considerable latitude in the establishment of such procedures as long as they follow the basic methodology provided in new § 455.64 including the calculation of savings-to-investment ratios. DOE has also eliminated the 10-year simple payback limit on ECMs for those States that adopt LCC procedures.

In order to provide consistency in the calculations for simple payback and life cycle costing, DOE has added a new subparagraph (u)(3) to provide for a State to specify if more than 50 percent of the savings used in calculating cost effectiveness shall be from the estimated value of the energy to be saved by the ECM. (As more fully discussed under

§§ 455.63 and 455.64, at least 50 percent of the savings used in such calculations shall always be from the value of the energy saved with the remainder coming from related non-energy cost savings.

DOE proposed adding a new paragraph (v) to require a State to describe its role as a coordinating agency. No one objected to this change, but commenters raised questions about how coordinating agencies would operate. DOE has revised paragraph (v) to require description of the role of any "coordinating agency" because the definition of that term allows for entities other than the State to perform that role. States could serve as coordinating agencies for TA applications or ECM applications or both. States could offer to select approved TA analysts or ECM contractors but could not require institutions legally independent of the State such as religiously affiliated institutions to restrict themselves to such selections. If there are State law prohibitions on State assistance to religiously affiliated institutions, then a State would have to restrict its coordinating role accordingly and make provision for DOE to issue direct grants to those institutions.

DOE is also providing guidance to its Support Offices on the coordinating agency function. It is important that the State work with its DOE Support Office to assure efficient operation of the coordinating agency process. A number of commenters said that States serving as coordinating agencies should be responsible for doing technical and other reviews of TAs, applications, and grantee reports. DOE agrees that any coordinating agency should be so responsible. On the other hand, DOE remains responsible for the program and intends to maintain necessary oversight.

DOE proposed adding new paragraph (w) to provide for a State to specify when it would consider applications for credit which would allow an applicant to apply costs incurred for TAs, ECMs, or TA updates against their non-Federal shares. Most commenters thought this was a good idea to offer as an option, but many objected to the 3-year limit placed on projects proposed for credit, which DOE proposed in § 455.102(b). DOE has consequently decided to drop that limit from § 455.102(b) (as will be discussed under that section) and the reference to it in this paragraph, and to add to paragraph (w) a provision that States can specify in their State Plans any time limits they propose to place on work proposed for credit. States can also limit credit to TAs, TA updates, ECMs, or a combination of some or all of these. Otherwise, DOE has adopted this revision as proposed.

A number of commenters asked whether a State could design its ICP program so that it required a non-Federal share of more than 50 percent (and consequently offered a Federal share of less than 50 percent) allowing the State to reach more institutions with assistance. Traditionally, ICP has offered 50/50 grants to most applicants (except those qualifying for severe hardship which could get up to 90 percent Federal share). However, the actual wording (for instance, in § 455.142(a) and (b), covering TA and ECM grants) is "DOE may make grants to schools, hospitals, and coordinating agencies for up to 50 percent of the costs * * *" (emphasis added). This language is consistent with section 396(b) of the Act, 42 U.S.C. 6371e(b). Since DOE is not legally required to make a 50 percent grant, DOE has no objection to allowing a State to offer applicants less than 50 percent Federal share grants. Therefore, DOE has added a new paragraph (x) to this section to provide for specification by a State of the level of Federal share funding it will offer applicants (i.e., what percent of the total cost will be provided by the Federal share and what percent must be provided by the grantee as the non-Federal share) if the State elects to offer less than 50 percent Federal share grants. Whatever percent the State elects to offer must apply to all grant applicants in the State except those qualifying for severe hardship.

Section 455.21 Submission and Approval of State Plans and State Plan Amendments

DOE proposed amending this section to provide a new paragraph (d) covering submission of State Plan amendments not required by DOE but wanted by the State and to provide in paragraph (e) for a 60-day review period for State Plan amendments by DOE. No one objected to those changes, and DOE has adopted them with some minor clarification to indicate when DOE acts through its Support Office Director. However, two commenters said they felt 90 days was not enough time to give States to submit revised Plans due to changes in regulations as provided in paragraph (a). Each of these commenters asked for 180 days to submit such revisions. DOE allows a State to seek an extension of time to submit such revisions in this section and consequently does not feel it is necessary to change the 90-day deadline. Another commenter asked why paragraph (e) said, "With the consent of DOE, the State may submit a new or amended plan at any time." That language comes from section 394(b) of the Act, 42 U.S.C. 6371c(b), but seems unnecessary in the rule in light of the extensive provisions for submittals of State Plans and amendments. Because the submission of an amendment may be considered a request for DOE consent, DOE has deleted the separate requirement for consent from the rule.

Section 455.30 Allocation of Funds

DOE proposed revising this section to provide for the State grants allowed by the 1990 legislation. There were no commenters opposed to this revision, and DOE has adopted it as proposed. However, there were a number of comments asking that coordinating agencies be specifically addressed, and DOE has, therefore, added a new § 455.30(b)(5) to cover such allocations which can be directed to TAs (up to the limit specified for TAs) and/or ECMs depending upon how the coordinating agency elects to operate.

Section 455.31 Allocation formulas

One commenter suggested that DOE should change the population figures annually in the allocation formulas. In fact, DOE does this using the most recent estimated census data which is revised annually by the Department of Commerce Bureau of the Census in years between each decennial census.

The sum of heating and cooling degree days is based on the National Oceanic and Atmospheric Administration most recent editions of "State, Regional, and National Monthly and Seasonal Heating Degree Days, Weighted by Population" and "State, Regional, and National Monthly and Seasonal Cooling Degree Days, Weighted by Population." The proposed rule referenced the source for census data and heating and cooling degree days. For technical, non-substantive reasons, DOE has deleted these references although the sources of data will continue to be the same. Copies of the source documents are available from DOE upon request.

Section 455.32 Reallocation of funds

DOE proposed a number of revisions to this section, partly to incorporate the new grants provided for by the 1990 legislation and partly to incorporate DOE policy on deobligation and reobligation of grant funds. There were many comments in response to these revisions most of which asked that States be allowed to retain and reobligate funds beyond the December 31 deadline provided for in the proposed revisions. Some commenters felt that States serving as coordinating agencies should be allowed more

flexibility in retaining and reobligating funds.

DOE believes that all grants should be treated in a consistent manner, and so has not established different deadlines for regular grants made to schools and hospitals and grants to coordinating agencies. A new paragraph (e) has been added covering grants provided through a coordinating agency. DOE has decided not to change the December 31 deadline for reobligation of funds which become available due to declined grants. DOE encourages States to evaluate all grant applications carefully to minimize the chances that grantees later decline their grant awards. Reobligation is a requirement under the Act, and DOE believes that there must be a limited amount of time for such funds to be reobligated within a State. After that time, such funds must be reallocated among all the States.

Subpart D—Preliminary Energy Audit and Energy Audit Grants

DOE invited public comment on the desirability of removing and reserving this entire subpart, because it was no longer being funded by DOE. Most comments on this possible deletion were favorable, and DOE has removed and reserved subpart D. Should funding ever become available for these activities in the future, DOE will restore those sections to the rule.

Section 455.61 Eligibility

DOE proposed a number of revisions to this section to provide for changes made by the 1990 legislation and by the proposed change to the EA requirements. There were no comments on these changes. DOE has revised this section in conformity with the discussion above explaining the DOE acceptance of a comment advocating continued use of EUEs as a prerequisite for TA grants.

One commenter asked that TAs be allowed for leased buildings. The Act generally precludes coverage of most leased buildings, 42 U.S.C. 6371(5). As mentioned in the definition for "owned or owns" at 10 CFR 455.2, the only type of lease that would be allowable is "a leasehold interest, which is, or shall become, a fee simple title in a building or complex."

Section 455.62 Contents of a Technical Assistance Program

DOE proposed a number of revisions to this section to provide the States the option of devising more flexible TA requirements, to require on-site analysis of buildings, to delete the separate calculations for coal and renewable conversions, and to require that demand charge data be provided where demand charge costs are included in energy costs. As already discussed under § 455.20, a number of commenters disagreed with allowing States to design TA requirements less complete than those in the old rule, while a few commenters thought TAs should be allowed to review a single ECM, or even be dispensed with altogether, if a clear-cut need for a single ECM is felt to exist. DOE continues to believe that even reduced TAs must appropriately examine a building's overall systems and a reasonable selection of possible ECMs, at least to the extent of verifying the findings in the EA or EUE; DOE has restored wording from the former rule relating to the reasonableness of the recommendations in the TA and the accuracy and completeness of the EA. DOE has not reduced the TA requirements for financially assisted TAs beyond what was proposed and has adopted that wording as proposed, with the revisions mentioned. DOE wants to emphasize the importance of a valid EA or EUE which should make a responsive TA much easier to do.

Three commenters felt the requirement for an on-site analysis was a good idea, and no one opposed that change; DOE has adopted it as proposed. One commenter suggested that States be allowed to specify when TAs might cover groups of structures or ECMs serving groups of structures or buildings, and DOE has so provided under the revisions already discussed in § 455.20.

A few commenters addressed the proposed change relating to deletion of the separate calculations for coal and renewable conversions. Because the calculations are now in § 455.63, this issue is discussed under that section. No commenters objected to the requirement to include demand charge data, and that change has been adopted as proposed.

A number of commenters asked why DOE performs technical reviews of TAs and other grantee documents since States already perform such reviews. DOE is responsible for oversight of the State reviews of the reasonableness and validity of TAs and grant applications before making a final funding decision. The DOE Support Offices work in close cooperation with the States in this regard but must use their own judgement as to the extent of DOE review. The better the State review, the less extensive should be the need for subsequent DOE review.

Section 455.63 Cost-Effectiveness Testing

As already discussed under § 455.20, DOE proposed allowing States the option of using either simple payback or life-cycle costing as their cost-effectiveness test for ECMs. This section was added to provide for the basic requirements for each approach. Most commenters were in favor of this option, but some felt States should be able to use both approaches, depending upon the ECM(s) involved. As discussed under § 455.20, DOE does not believe this would be workable and has not made this change.

DOE has, however, provided in the calculations for both simple payback and life-cycle costing that estimated non-energy cost savings may be taken into consideration in determining cost effectiveness as long as those non-energy savings do not exceed 50 percent of the savings used in the calculations. The estimated value of the energy to be saved by the ECM shall represent in all cases at least 50 percent of the savings used in cost-effectiveness calculations. Pursuant to § 455.20(u)(3), States may specify in their State Plans a greater than 50 percent requirement for the value of the energy saved (and a corresponding lower than 50 percent limit for non-energy savings). Non-energy savings could include net savings from maintenance and operating procedure changes related to the ECM and/or savings from changes in type of fuel used.

On the issue of the separate coal and renewable calculations, most of the commenters who addressed this proposed change disagreed with at least part of it. Some felt the coal calculation should be restored; others wanted the renewables calculation to continue. DOE has decided to add a new § 455.63(a)(2) to provide a new calculation approach for renewables which requires that the costs of the renewable fuel and any backup non-renewable fuel needed for the operation of the renewable ECM must be subtracted from the cost of the fuels displaced to determine the estimated savings from the ECM. This change would then permit renewables to be evaluated on the basis of net cost savings rather than on the value of the energy saved. As indicated in the definition of renewable resource energy conservation measure in § 455.2, to qualify for this calculation at least 50 percent of Btus produced after the conversion must be from the renewable energy source.

DOE believes this separate calculation approach for renewables is justified by the legislative definition of "energy conservation measure" as "an installation or modification of an installation in a building which is primarily intended to maintain or

reduce energy consumption and reduce energy costs or *allow the use of alternative energy source* * * *" (section 391(2) of the Act, 42 U.S.C. 6371, emphasis added). While the Act does not explicitly define "alternative energy source," section 301 of Public Law 95–619 (42 U.S.C. 6371 note) refers to the rapid depletion of "the Nation's non-renewable energy sources." Accordingly, DOE has decided not to restore the former calculation for coal conversions (i.e., allowing them to be based on the net cost savings without demonstrating energy savings).

However, DOE has added a new subparagraph (a)(3) to this section to provide a simple payback calculation for ECMs designed to shift demand to periods of lower demand and cost. As previously discussed, because of the 1990 legislation, such ECMs need only maintain previous energy usage and can be evaluated based on cost savings. The net result of these changes is to leave renewable conversions and ECMs that shift demand to periods of lower demand and cost as the only two types of ECMs funded by ICP whose calculations to determine simple payback need not consider the value of the energy saved. As previously discussed under the definition of "energy conservation measure," ECMs whose purpose is simply to switch from one non-renewable energy source to another non-renewable energy source, but which result in no energy savings, are not eligible under ICP.

Section 455.64 Life-Cycle Cost Methodology.

DOE proposed, in § 455.63, to use 10 CFR part 436 (the regulations for the Federal Energy Management Program) for life-cycle cost methodology. A number of commenters asked if DOE was going to provide further guidance on this subject. Upon further review of 10 CFR part 436, DOE has decided that, rather than a cross reference to that part, it would be preferable to include in the ICP regulations an adaptation of 10 CFR part 436 for use in doing life-cycle costing under ICP with States then permitted to develop their own procedures consistent with those basic requirements. DOE has, therefore, added new § 455.64 to cover the life-cycle cost methodology for ICP. There is a manual under 10 CFR part 436 which provides guidance and is available from DOE on request.

Several commenters asked if States could use their own discount rates and fuel cost escalation rates instead of those in 10 CFR part 436. Within the limitations set forth in § 455.64, States may use a higher discount rate and a lower energy cost escalation rate. States may also elect to use the figures provided annually by DOE pursuant to 10 CFR part 436.

In the preamble discussion to the Notice of Proposed Rulemaking, DOE indicated that it was considering limiting the savings to be used in life-cycle cost calculations under ICP to energy cost savings, and DOE asked for comments on this idea. One commenter suggested that DOE let each State decide. The statutory definition of "energy conservation measure" makes clear that, except for demand-shifters and renewables, such measures are primarily intended to conserve energy rather than just save money. Therefore, except for demand shifters and renewables, DOE has decided to require, in the life-cycle cost calculations under § 455.64, that the estimated value of the energy that will be saved by installing the ECM constitute at least 50 percent of the savings used to evaluate an energy conservation measure under the life-cycle costing approach. DOE has further allowed States to specify a higher percent for the value of the energy to be saved if they elect to do so in their State Plans. These provisions are consistent with the new provisions for calculating simple payback, already discussed under § 455.63.

DOE believes that the 50 percent minimum for the value of energy to be saved is a reasonable floor to place on this calculation in the context of a program intended primarily to foster energy conservation. Other estimated cost savings, such as from ECM-related maintenance and operating procedure changes or from changes in type of fuel used, can be included in these calculations up to the limit set by the State, but they may not exceed 50 percent of the estimated savings used in the calculations. Here again, this is consistent with the change already discussed under § 455.63 relating to calculations for simple payback.

Section 455.71 Eligibility

DOE proposed revising this section in a number of areas, including: Deleting the exclusion of administrative buildings used by local education agencies, as provided by the 1990 legislation; providing for TA updates where the States require them; and providing for the State option of using simple payback or life-cycle costing in cost-effectiveness testing of ECMs. These changes have already been discussed under other sections, and no commenters disagreed with them, so DOE has adopted them as proposed.

DOE also proposed extending the allowable payback range to 15 years (from 10 years) for States using the life-cycle costing approach. A number of commenters asked that other changes be made to the allowable payback range, including suggestions to make the range 2 to 12, 1 to 15, or 1 to 10 years for all applicants. Commenters urging a reduction in the minimum payback generally said that, even though it would appear reasonable that institutions should fund ECMs with less than 2-year paybacks (with a 50 percent match, that means the institution's payback would be 1 year), nevertheless, many institutions are not able to fund these lower-payback ECMs internally.

DOE continues to believe that institutions should make every effort to fund lower-payback ECMs on their own, and use grant funds only for the somewhat higher-payback ECMs which would be more difficult to fund internally. DOE has, therefore, not changed the 2-year minimum allowable payback. DOE has left the higher end of the allowable range at 10 years for simple payback and has limited the study period for life-cycle costing to 15 years. DOE has made this distinction because for study periods beyond 10 years the failure to discount to present value is a significant distortion in testing for cost effectiveness.

DOE proposed revising this section by adding the prohibition on leased equipment which was formerly in the definition of ECM. All the comments on this change were favorable, but several thought it should be made clearer that ECMs purchased through long-term purchase agreements were eligible as was explained in the preamble. DOE has added wording to § 455.71(c) to provide this clarification.

Although not proposed for change, one commenter said that DOE should drop the requirement that maintenance and operating procedure changes be implemented before an ECM application can be accepted because the requirement was unworkable. DOE continues to believe that ICP grantees should implement maintenance and operating procedure changes (and that States should constantly encourage this), because maintenance and operating procedure changes are low-cost, high-return items which can make ECMs unnecessary. DOE has, therefore, not changed the requirement in § 455.71(a)(5) that maintenance and operating procedure changes be implemented before ECMs can be eligible for funding. (To further help with this effort, DOE has also continued to require in § 455.62 that TA analysts assume that the maintenance and operating procedure changes have been implemented in doing calculations for

ECM applications; so it continues to behoove applicants to implement them.)

DOE has also added a new § 455.71(a)(6) that requires applicants to comply with any State requirements to avoid supplanting other funds, as specified in the State Plan pursuant to § 455.20 which was also discussed under that section.

Section 455.72 Scope of the Grant

DOE proposed revising this section by making a distinction between the design costs incurred as part of the TA and those incurred as part of the ECM installation. One commenter felt a further clarification was needed, and DOE has, therefore, revised the wording to state that allowable ECM design costs would exclude design costs funded under the TA.

Subpart G—State Administrative Expenses

DOE proposed adding this subpart with § 455.80, § 455.81 and § 455.82. There were no negative comments on this change, and DOE has adopted this revision as proposed. One commenter suggested that activities allowable under the new grants provided for by the 1990 legislation (such as marketing and program assistance) be added as examples of allowable activities under the State administrative grant in § 455.82. Although the State can use administrative funds to oversee such activities, as stated in the introductory paragraph to § 455.82, DOE does not believe it would be appropriate for States to perform the activities themselves using the administrative grant. States should apply for separate grants to carry out these activities, pursuant to § 455.121.

Subpart H—State Grants for Technical Assistance, Program Assistance and Marketing

DOE proposed adding this subpart (with § 455.90, § 455.91, and § 455.92) to provide for these new grants made allowable by the 1990 legislation. No comments were opposed to this change, but a number of commenters raised questions about the new grants. One commenter wondered if States could run both an appropriated grant program and a new grant program with non-Federally funded ECMs. That would be possible if a State elected to do this and met the respective requirements. DOE even alludes to such a situation by requiring that any State with a constitutional prohibition on direct State assistance to eligible religiously affiliated institutions continue to make appropriated fund grants available to such institutions if the State's non-Federal funding source(s) for ECMs would not be available to such institutions.

Another commenter asked whether only programs directly funded by the State would be counted as part of the aggregate program funds, for purposes of § 455.121(a)(3). DOE believes it is not realistic to expect that only State-provided funds qualify, but DOE believes it is essential that a State directly relate the non-Federal funds to the State program to obtain those funds. It would not be acceptable, for instance, to include in the aggregate figure ECMs done by institutions that received no financial assistance either directly from the State or through the State program to identify and get committed the non-Federal funding sources.

DOE takes very seriously a State obligation to obtain the non-Federal funds for ECMs and then relate such efforts to the ECMs done with the funding. If necessary, States can use part of their marketing grant to do this. The funds need not be direct State funds, but the State must be able to document that its program(s) identified them and made them available to the eligible institutions in the State for ECMs. Another commenter asked if TAs could be provided throughout the year under the new State-run TA grants. This is possible under these new grants and is covered in § 455.92(b). DOE has adopted this subsection as proposed.

A much more extensive discussion of the grants funded under Subpart H will be found in the preamble to the NOPR, 57 FR 438–439.

Subpart I—Cost Sharing

Section 455.100 Limits to Federal Share

DOE proposed adding this section as part of new Subpart I—Cost Sharing. None of the commenters opposed this change, and DOE has adopted it as proposed. However, a number of commenters asked if States could run cycles where they offer less than a 50 percent Federal share for ICP grants (thereby requiring a more than 50 percent non-Federal share). DOE has not changed the wording of this section which says "may not be used to pay more than 50 percent of the costs * * *". As discussed under § 455.20, a State may decide if it wants to offer less than 50 percent Federal share grants, and if so, to specify this in its State Plan. Two commenters also asked if TA grants could exceed a 50 percent Federal share for other than applicants qualifying for severe hardship. DOE has not made that change because DOE believes that TAs (whether funded directly by DOE or through a State grant for TAs as provided for by the 1990 legislation) need to be treated consistently, with no more than a 50 percent Federal or State share, unless a severe hardship grant is involved; the funding source for TAs in both cases is appropriated funds which must be administered pursuant to the Act which includes the 50 percent limitation for other than severe hardship grants.

Section 455.101 Borrowing the Non-Federal Share/Title to Equipment

DOE proposed adding this section as a result of the 1990 legislation. There were no negative comments on this revision, and DOE has adopted it as proposed. An extensive discussion of this section appears in the preamble to the NOPR published in the Federal Register on January 6, 1992, 57 FR 439–440. When applicants borrow their matching shares and have liens placed on grant-funded equipment, they should keep in mind that all applicable regulations and requirements apply to their grants. Grant applicants are cautioned to assure that any financing agreement or related equipment acquisition agreement is in compliance with all applicable rules and regulations.

Section 455.102 Energy Conservation Measure Cost-Share Credit

DOE proposed adding this section to provide for the new State option to allow credit for previously non-Federally-funded projects. All of the commenters on this section liked the idea of offering the States the option, but seven of the eight commenters objected to the 3-year time limit for projects to qualify for credit. They thought DOE should allow each State to decide on whatever time limits it feels is appropriate. DOE has decided to drop the 3-year time limit as a result of these comments and has adopted the change with that revision. As already discussed under § 455.20, States electing to accept applications for credit will have to specify in their State Plans the conditions for doing so and any time limits. One commenter asked that DOE allow credits for upgrades to ECMs formerly funded by an ICP grant. DOE has not made this change because many eligible institutions have not yet received ECM assistance and States should be concentrating on attracting those institutions to the program. (However, under § 455.140(e) DOE has provided for the funding of replacement ECMs in cases where a State has allocated funds left over after ranking all of its applications for new ECMs.)

Section 455.103 Requirements for Applications for Credit

DOE proposed adding this section to clarify the requirements and to provide for the new State option to allow credit as discussed under § 455.102. There were no comments on this section, and DOE has adopted it as proposed.

Section 455.104 Rebates from Utilities and Other Entities

DOE proposed adding this section to set forth the requirements for handling rebates received by ICP grantees. As proposed, the section allowed grantees to use such rebates for their non-Federal shares and did not require the rebates to be deducted from project costs. Most of the 12 commenters who addressed this section liked the idea of allowing rebates to be used for the non-Federal share, but about half of the commenters pointed out that, where rebates were especially generous, they could exceed the non-Federal share. If such a situation occurred, the combination of the rebate and the Federal share of the grant would exceed the cost of the ECM(s) being funded. DOE did not intend the Federal share to end up being greater than a grantee's net cost after application of any rebate(s). Therefore, DOE has revised § 455.104(b) and added a new § 455.104(c) to specify that, if rebates exceed the non-Federal share, they can be used to fund additional approved ECMs; if excess rebates cannot be used in this way, the ECM cost (and grant) must be reduced. Otherwise DOE has adopted this change as proposed.

Other commenters felt that States should be able to exclude from ICP eligibility certain ECMs that are also being funded by rebates or other sources of funding in the State. DOE agrees that this is a valid idea and has added that option for the States to include in their State Plans as previously discussed under § 455.20.

Subpart J—Applicant Responsibilities—Grants to Institutions and Coordinating Agencies

Section 455.110 Grant Application Submittals for Technical Assistance and Energy Conservation Measures

DOE proposed a number of changes to this section relating to TA grant applications, life-cycle costing, and TA updates. No one commenting on this section objected to the proposed changes, but, because of several questions about how coordinating agencies operate, DOE has added several clarifications on how such entities would apply for grants. Otherwise DOE has adopted the changes as proposed. There were, however, two questions raised about parts of the section not proposed for change. One commenter asked if ICP grant applications would be required for the non-Federally funded ECMs provided for under the 1990 legislation. The requirements in § 455.110 apply to ICP grants only, not to whatever programs States establish to non-Federally fund ECMs pursuant to the new programs. Applicants for those programs would have to submit whatever information is required by the State or other funding source. They would not submit ICP grant applications. By the close of each cycle, the State would need to submit to DOE the same data on buildings, ECMs, estimated costs, and energy cost savings for ECMs supported by non-Federal funds as are now submitted on all other appropriated and PVE fund grants as specified in § 455.123.

Two commenters asked about the wording of § 455.110(c)(6) which began "Unless waived by DOE, the report of the technical assistance analyst * * *" They thought this wording suggested that DOE could waive the need for a TA altogether. The intent of this sentence is to allow DOE to say it does not need another copy of the TA in cases where it has already received one (for instance, as a result of an earlier TA grant). Because this language caused confusion, DOE has revised it to make the intent clear.

Section 455.111 Applicant Certifications for Technical Assistance and Energy Conservation Measure Grants to Institutions and Coordinating Agencies

DOE proposed revising this section to provide for the new State EA requirements and for new certifications from grantees that have liens placed on grant-funded equipment; grantees would be required to assure that contracts provide for DOE notification should the grantee later be sued by a lender having a lien due to problems with repayment of the loan. One comment was received on this section asking what interest DOE had in ECMs funded under the ICP grants. Because ECM grants are made for very specific purposes which would be negated by a loss of the equipment, DOE needs to be advised if property funded with an ICP grant should subsequently be lost to a grantee such as through repossession. DOE has revised this section to require that the DOE interest in the equipment (i.e., the percent of the total cost provided by the ICP grant) be stated in the financing contract to make this interest clear. DOE has also revised this section slightly to conform to earlier changes made regarding the requirements for an EA and is adding coordinating agencies to the heading to make it clear that the certifications are required from such entities. DOE has otherwise adopted this section as proposed.

Section 455.112 Davis-Bacon Wage Rate Requirement

DOE proposed revising this section to clarify the language. No commenters opposed the revisions, and DOE has adopted them as proposed. However, three commenters were concerned about various aspects of the requirement (dollar threshold is too low; some contractors will not participate because of the requirement especially on small projects, etc.). DOE has not changed the requirement because it is in the Act. DOE indicated that this provision would not apply to non-Federally funded ECMs, and this was favorably received by commenters.

Section 455.113 Grantee Records and Reports for Technical Assistance and Energy Conservation Measure Grants to Institutions and Coordinating Agencies

DOE proposed a number of changes to this section. One of the changes involved having grantees send one copy of each report to the State and one copy to DOE (rather than having both copies go to the State with DOE getting its copy later from the State). All of the eight commenters who addressed this revision thought it was a bad idea: It would confuse grantees; both the State and DOE would be making corrections at once; grantees are used to hearing from their States about problems with reports, etc. On the other hand, DOE also heard that there were delays sometimes in getting reports from the States. DOE has decided to change this section to provide that each DOE Support Office will agree with its States on how reports are to be submitted. Some Support Offices may ask for copies of reports directly from grantees, while others may ask the State to get both copies from the grantees and later send DOE its copies on an agreed-upon schedule.

DOE also proposed revising this section by requiring final ECM costs in reports. One commenter thought this was a good idea, but two commenters felt it might be unduly burdensome in the case of final life-cycle costs. DOE believes it is important to have final cost information and has not changed this requirement. For States electing to use life-cycle costing, grantees should be able to include a requirement that the TA analyst provide the final life-cycle cost as part of the original TA contract.

Another commenter felt it would be unreasonable to require the same reports from institutions receiving non-Federal ECM funding. In fact, such institutions are not required to file these reports, although they may be required to file other reports needed by the entity providing the non-Federal funding. (States that have non-Federally funded ECM programs must file their own reports with DOE pursuant to § 455.123.)

One commenter suggested that DOE require, in final reports on ECMs, that grantees include descriptions of changes in scope. DOE believes that this is already required in both the semi-annual progress reports and in the final report, both of which require grantees to report on what has and what has not been accomplished. Scope changes would be an important development to describe in those reports.

DOE also proposed revising this section to replace the old energy use reports required of all ECM grantees, with a new sample report. DOE proposed a "statistically valid" sample. A number of commenters on this section objected to this idea either because they liked the old requirement or they thought the new one was unreasonable or unclear as to what was required. Other commenters thought the sample idea was a good one, although it was pointed out that statistical validity might be too difficult to achieve in this context. DOE has decided to retain the sample requirement in subparagraph 455.113(b)(2)(iii) but is changing "statistically valid" to "representative." DOE will work with States to develop a good report format, and DOE wants to emphasize the importance of gathering this sample data. A number of commenters also mentioned the need for obtaining valid data on program results.

DOE has added coordinating agencies to the title of this section to make it clear that they are included in these requirements. They have always been in the text of this section (paragraph (a)) but were not in the title. For clarity, DOE has inserted in paragraph (b)(2)(i) a sentence to reinforce the requirement on coordinating agencies to report semi-annually with regard to financial assistance unused as a result of scope changes as well as financial assistance declined.

Section 455.120 Grant Applications for State Administrative Expenses

DOE proposed revising this section to raise the minimum base administrative grant to $50,000 (from $30,000) and drop the matching requirement. There were 18 comments on this revision, many of which agreed with the change, while perhaps an equal number wanted the minimum base amount raised to $60,000 (some also wanted the 5 percent maximum amount, not proposed for change in the NOPR, raised to 10 percent of the schools and hospitals grants awarded in the cycle). DOE has not changed the amounts proposed in this section, but DOE will review these amounts 3 fiscal years after the effective date of this rule and annually thereafter. If warranted by inflation and other considerations, the amounts may be adjusted by DOE at that time.

A few commenters expressed concern that removal of the matching requirement might cause some State programs to get less funding than before, because some States would feel no obligation to contribute State funds to program administration without the matching requirement. DOE hopes this does not occur and may have to review this aspect of the rule at a later date if it appears this is, in fact, taking place. DOE also proposed revising this section by adding a provision for States to apply for administrative grants if they have programs to provide non-Federal funds for ECMs as allowed by the 1990 legislation. No commenter objected to this provision, and DOE has adopted it as proposed. One commenter suggested that States should be able to charge grantees a fee (up to 5 percent of the grant) in addition to receiving an administrative grant from DOE. DOE believes that States should not "tax" grantees in addition to receiving an administrative grant from DOE.

Several commenters felt that this section was confusing, as presented, and DOE has revised the section to clarify the process. As discussed more fully under § 455.134, applications for State administrative grants should be coordinated with applications for new grants for technical assistance, program assistance, and marketing.

Section 455.121 Grant Applications for State Technical Assistance, Program Assistance, and Marketing Programs

DOE proposed adding this new section to cover grants newly allowable under the 1990 legislation. A number of commenters objected to the requirement that funds have to be obligated or committed to ECMs in the same fiscal year in order to be counted toward the aggregate program funds for the purposes of paragraph (a)(3). Several commenters asked for more time, especially to get the non-Federally funded ECM programs established (3 to 5 years were suggested by many). DOE believes 3 to 5 years is an unacceptably long time, and also believes that the 1990 legislation clearly does not provide for such a delay in getting the non-Federal funds for the ECMs committed to eligible institutions. DOE has, therefore, not changed this section and has adopted it as proposed in this regard. States that intend to use their appropriated allocations for new grants for TAs, marketing, and/or program assistance need to assure that their non-Federally funded ECM programs are coordinated with their ICP grant programs in such a way that the non-Federal ECM funds get obligated or committed to eligible institutions during the same fiscal year as the appropriated funds are granted to, and used by, the State.

DOE also proposed in this section that non-Federally funded ECMs be completed in accordance with "all applicable Federal, State and local laws and regulations." Many commenters felt it was inappropriate to require such projects to comply with Federal requirements. DOE has retained the requirement because section 396(d)(2)(A) of the Act indicates that States must use non-Federal funds, as well as Federal funds, "* * * to implement energy conservation measures and otherwise carry out a program *pursuant to this part* * * *" (emphasis added).

A number of other areas of this section have been discussed earlier, such as the need to relate the non-Federally funded ECMs to the ICP-funded program(s) in order for them to be counted as aggregate program funds. DOE has not changed that requirement. One commenter asked how funds for marketing and program assistance could be "obligated" to recipients. DOE inadvertently left out of some sections of the proposed rule the complete phrase "legally committed or obligated," and has made this correction throughout to make clear that the State must be able to document that it has utilized these grant funds as intended (and that non-Federal ECM funds have likewise been appropriately obligated or committed through some legal means) during the fiscal year for which the funds were allocated and granted.

One commenter asked if the 30 percent schools/30 percent hospitals minimums applied to the non-Federally funded ECMs. DOE feels States need to design their non-Federally funded ECM programs to equitably serve all eligible institutions, and States must address this in their State Plans. While a strict 30/30 split may not always work out, a non-Federally funded ECM program that targeted only schools or only hospitals would clearly not be desirable.

Another commenter asked if DOE would review the non-Federally funded ECMs. DOE certainly reserves the right to do selective monitoring of these projects because they relate to appropriated funds, but DOE would not plan to review the projects at the proposal stage. States need to set up procedures for doing this, however, to ensure that the projects qualify.

As discussed more fully under § 455.134, a State application for a grant for technical assistance, program assistance and marketing should be coordinated with an application for a grant for State administrative expenses.

Section 455.122 Applicant Certifications for State Grants for Technical Assistance, Program Assistance, and Marketing

DOE proposed creating this new section to cover the certifications States must submit if they elect to apply for the new types of grants provided for by the 1990 legislation. There were many comments about the requirements for these grants relating to other sections, but only one commenter addressed the certifications and that commenter supported the idea of relating the new grants to non-Federally funded ECMs done in the same fiscal year. DOE has adopted this section as proposed and reiterates that it is crucial that States undertaking these new grant activities establish viable non-Federal financing programs as part of this effort.

Section 455.123 Grantee Records and Reports for State Grants for Administrative Expenses, Technical Assistance, Program Assistance and Marketing

DOE proposed creation of this new section to cover the reporting requirements for all types of grants to States. One commenter agreed with the requirement that DOE be provided with adequate documentation of institutions receiving assistance under the new grants or through the non-Federal funding for ECMs; no one opposed this section. DOE has added some clarifying language to require that DOE be provided with the same data on buildings, TAs, ECMs, costs and energy cost savings as is currently provided for both appropriated and PVE funded ICP grants. Otherwise DOE has adopted this section as proposed.

DOE is particularly concerned that the results of these new grant activities and their related non-Federally funded ECM programs be reported to DOE as required in this section, so that DOE can demonstrate the relationship between the use of its appropriated funds for the new activities and the installation of ECMs using non-Federal funds. DOE is also interested in assuring that its data base on all ICP-related TA and ECM projects is maintained in a consistent manner. Since a State sponsoring a non-Federally funded ECM program would need to gather this data anyway, to support the certification required under § 455.122 and to otherwise track the progress of its program, this requirement should not involve any additional data gathering burden for the State.

Subpart L—State Responsibilities

Section 455.130 State Evaluation of Grant Applications

DOE proposed revision of this section by providing for a State to specify whether it has requirements for review and certification of hospital applications. No one commented on this section, and it has been adopted as proposed.

Section 455.131 State Ranking of Grant Applications

DOE proposed a number of revisions to this section, including providing an exception from the ranking requirement for State-funded TAs, allowing for new EA requirements, and making several changes to the weighting of criteria for ranking.

There were a number of comments about various aspects of this section. Two commenters questioned what was meant by "on a percentage basis" in paragraph (b), covering TAs. What DOE means is that the conservation potential should be viewed as the percent of the total energy consumed or the total energy costs (or other relevant percentage savings parameter) that can be saved by making conservation improvements proposed in the EA. The intent is to assure that smaller buildings be given an equal opportunity to receive TA funding even if their potential dollar savings might be less when compared with larger buildings. DOE has adopted this revision with added wording to make that intent clear.

One commenter felt that DOE should drop the requirement for EA data used as a basis for the TA grant application. DOE believes the information included in the EA is the minimum necessary to evaluate TA applications and has not changed this requirement. States can now design simpler EAs, as discussed under § 455.2, and § 455.20, so that EAs need not be burdensome documents.

Another commenter wanted DOE to restore "directly involves," instead of the phrase "is physically connected to" proposed for the paragraph relating to ECMs in several buildings. DOE believes "is physically connected to" is the better description, as it is the minimum requirement for such ECMs to be considered a single measure serving several buildings; DOE has not changed this requirement.

DOE proposed revising the weighting requirements for ECMs to require that at least 50 percent of a measure's ranking be based on cost effectiveness. Many commenters objected to this change, indicating that States should be given the option of deciding the weighting factors. DOE continues to believe that the 50 percent weight for cost effectiveness is a valid one and is not changing that requirement. States should have sufficient flexibility with the remaining 50 percent of the weighting to target particular types of ECMs, etc., without unduly skewing the program away from its primary goal of providing institutions with cost-effective ECMs. It is important to note, however, that States may not adopt ranking procedures that have the effect of giving greater weight to non-energy related savings than to energy related savings.

DOE also proposed revising this section to drop the former priority ranking for coal and renewable conversions. Several commenters objected to this revision. DOE has not restored that priority in the rule, but States can design their weights to give such conversions some priority in the State ranking process.

One commenter said that ECMs that are non-Federally funded should not have to be ranked. In fact, they do not have to be ranked. As previously discussed, institutions doing such ECMs would have to meet whatever reporting and application requirements are established by the State or other source of financing. Such applications would not be submitted with appropriated fund grant applications. Another commenter suggested that the 30 percent for schools/30 percent for hospitals minimums be dropped so States could set their own minimums. Those percentages are in section 396(d)(1) of the Act (42 U.S.C. 6371e), and DOE has not changed this requirement.

DOE has added clarifying language to paragraph (e) to explain that if a State elects to allow applications for credit, the Federal share shall not exceed the cost of the work remaining to be done. This is not a new requirement; it has been a longstanding DOE policy. DOE believes it helps explain the process for credit to add this wording to the rule.

Section 455.132 State Evaluation of Requests for Severe Hardship Assistance

DOE proposed adding this section which was adapted from another section

in the old rule. DOE also proposed to revise the wording to provide that financial need be the primary criterion for severe hardship. A number of commenters felt it was unrealistic or too difficult to try to determine financial need and preferred the old criteria which included other considerations like local unemployment rates and median family income. DOE believes that any institution that applies for severe hardship (which can provide a Federal share of up to 90 percent of the cost of the TA or ECM) should be willing and able to document its financial need for such assistance to the State; DOE has not changed this requirement.

One commenter asked if States had to provide for hardship assistance under the non-Federally funded ECM program or if States could set aside more than 10 percent of the non-Federal funds for hardship. As has been previously discussed under other sections, DOE believes it is up to each State to design its non-Federally funded ECM program(s) to best meet the needs and resources of that State. Therefore, States would not have to provide for hardship or could provide more than 10 percent set aside for hardship. So that potential participants understand the State program(s), such aspects of the program(s) must be set forth in the State Plan. However, because the non-Federal funds for ECMs might not be in the form of grants, the mechanisms to direct the funds to hardship candidates might have to differ from the process in this rule. There is a more detailed discussion of the revisions to this section in the preamble to the NOPR published in the **Federal Register** on January 6, 1992 (57 FR 442–443).

Section 455.133 Forwarding of Institutional Applications for Technical Assistance and Energy Conservation Measure Grants

DOE proposed revising this section to distinguish it from the next section, which covers applications for grants to States, and then to require States to certify that the applications meet program requirements. One commenter felt it was unrealistic to require States to certify this, but DOE believes this is a reasonable requirement to make of States, and DOE has not changed this requirement.

Several commenters asked why applications had to be submitted once a cycle. That is a requirement in section 395(a) of the Act, 42 U.S.C. 6371d(a), and DOE has not revised this requirement.

Another commenter said that States serving as coordinating agencies should be responsible for reviewing applications submitted to them in that role. DOE agrees that is the ideal situation but points out that each State needs to specify its role as coordinating agency in its State Plan and work out the details of implementation with its DOE Support Office. Because the funds granted to coordinating agencies under ICP are appropriated funds, DOE is responsible for their oversight. A State should assume the primary management role when it is a coordinating agency, but, if a State cannot adequately carry out that responsibility, DOE will be obliged to require more DOE participation in the process. This is clearly a situation where a case-by-case, perhaps cycle-by-cycle, review of each situation will be necessary.

Section 455.134 Forwarding of Applications for State Grants for Technical Assistance, Program Assistance, and Marketing

DOE proposed adding this section to cover new grants provided for by the 1990 legislation. Several commenters asked if separate applications needed to be submitted for the new grants under the 1990 legislation and for the administrative expenses grant. In fact, a single application should cover all these grants, and the language of this section has been revised to clarify this. As provided for in §§ 455.143 and 455.144, separate grants will be issued for each activity or program included in such applications (such as administrative expenses, program assistance, marketing, or technical assistance). DOE has, therefore, specified that sufficient information (including a separate, specific budget, narrative description, and appropriate milestone dates for each activity or program) should be submitted for DOE to reasonably evaluate the application.

Section 455.140 Approval of Applications From Institutions and Coordinating Agencies for Technical Assistance and Energy Conservation Measures

DOE proposed revising this section in a number of areas. No commenters objected to the revision to clarify intent regarding cost overruns, and DOE has adopted it as proposed. Several commenters asked why DOE did not allow ECMs to be funded to replace earlier funded ECMs. DOE believes there are still many institutions that have never received ECM funding and should be served first. However, DOE has added a new sentence to paragraph (e) to allow States to fund ECMs that replace ECMs funded by ICP in earlier cycles only in cases where a State has funds remaining after providing for all grants for new ECMs which are not replacements. DOE believes this will avoid allowing an institution that has already had an ECM funded from taking precedence, in a replacement ECM application, over institutions that are applying for new ECMs.

A number of commenters also suggested that DOE allow second TAs to be funded. DOE has not made this change. With the limited amount of ICP funding available, and the large number of institutions that remain to be served, DOE does not believe second TAs are an appropriate use of program funds. DOE has made provisions for States to allow credit for TA updates, however, as previously discussed. DOE proposed revising this section to provide for the State option to allow applicants to resubmit applications for ECMs that were previously included in grants but for which no funds were expended. There were no negative comments on this revision, but several commenters asked that TAs be added if they were previously provided for in a grant but not done. DOE agrees that is reasonable, and has adopted this revision with that change.

DOE further proposed revising this section by providing for grantees to use funds from cost underruns for additional approved ECMs. Everyone commented favorably on this change, but several said that requiring DOE approval for the use of such funds would delay implementation of the additional ECMs. Since appropriated funds are involved, DOE has a responsibility to review and approve changes from original grant applications that involve spending the funds differently from what was first proposed and approved by DOE. Therefore, DOE has not changed the requirement that it approve scope changes or other changes in the use of ICP grant funds.

Section 455.141 Grant Awards for Units of Local Government and Public Care Institutions, and Coordinating Agencies

DOE proposed revising this section to delete the $500 limit for equipment purchases under this type of grant. One commenter liked this change, and no one opposed it; DOE has adopted it as proposed.

Section 455.142 Grant Awards for Schools, Hospitals, and Coordinating Agencies

DOE proposed making the same change to this section as was made for § 455.141 just discussed. With this change, meters could be purchased and installed using TA grant funds. There

were no negative comments, and DOE has adopted the section as proposed. As previously discussed under § 455.20, States are being provided the option of offering less than 50 percent Federal share grants. Several commenters raised this issue in commenting on § 455.142, but DOE does not believe any change is needed to this section because it now provides for "up to 50 percent of the costs * * *"

Section 455.142 deals with grant awards for TAs and ECMs. It may be useful for coordinating agencies to be aware that if they have applied for both TAs and ECMs, DOE intends to issue separate grants for TAs and ECMs because TAs typically closeout earlier. This management practice should not materially affect any significant interest of coordinating agencies.

Section 455.143 Grant Awards for State Administrative Expenses

DOE proposed revising this section to allow for the increased grants for State administrative expenses discussed previously and to delete the requirement for a matching contribution from the State. Most of the comments about these grants have already been covered in earlier sections. One commenter pointed out that DOE referred, in § 455.143(a)(3), to an incorrect citation. The correct citation is § 455.123(b)(2), and DOE has made that change. Otherwise DOE has adopted this section as proposed.

Section 455.144 Grant Awards for State Programs To Provide Technical Assistance, Program Assistance and Marketing

DOE proposed adding this section to cover the new types of grants provided for by the 1990 legislation. The comments on these new grants have already been covered earlier, and DOE has adopted this section as proposed.

Response to Additional Suggestions

DOE asked in the NOPR whether program participants preferred to have this rule made effective during the cycle in which it is published in the Federal Register or in the next cycle after publication. There were many responses to that question, most of which asked that DOE effectiveness not be delayed until the next cycle after publication in the Federal Register. DOE has, therefore, made this rule effective 30 days after publication in the Federal Register. States that are not yet sure how they want to address some or all of the new State options offered in this rule can wait to make those changes. Nondiscretionary changes must be made in accordance with the time limits in this rule. However, States that have already announced their next cycle before the rule is published may wait until the following cycle to incorporate changes into their State Plans if they do not want to implement such changes in the earlier cycle.

III. Review Under Executive Order 12291

Today's issuance was reviewed under Executive Order 12291. DOE has concluded that the rule is not a "major rule" because it will not result in: (1) An annual effect on the economy of $100 million or more; (2) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies or geographic regions; or (3) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete in domestic or export markets. In accordance with the requirements of the Executive Order, this notice has been reviewed by the Office of Management and Budget.

IV. Review Under Executive Order 12778

Section 2 of E.O. 12778 instructs each agency subject to E.O. 12291 to adhere to certain requirements in promulgating new regulations and reviewing existing regulations. These requirements, set forth in sections 2(a) and (b)(2), include eliminating drafting errors and needless ambiguity, drafting the regulation to minimize litigation, providing clear and certain legal standards for affected conduct, and promoting simplification and burden reduction. Agencies are also instructed to make every reasonable effort to ensure that the regulation: Specifies clearly any preemptive effect, effect on existing Federal law or regulation, and retroactive effect; describes any administrative proceedings to be available prior to judicial review and any provisions for the exhaustion of such administrative proceedings; and defines key terms. DOE certifies that today's final rule meets the requirements of sections 2 (a) and (b) of E.O. 12778.

V. Review Under the Regulatory Flexibility Act

These regulations were reviewed under the Regulatory Flexibility Act, Public Law 96–354, which requires preparation of a regulatory flexibility analysis for any regulation that will have a significant economic impact on a substantial number of small entities, i.e., small businesses and small government jurisdictions. The changes proposed in this action primarily clarify the regulations or add flexibility to the existing program. Thus, these changes have a minimal effect on small entities. DOE, therefore, certifies that there will not be a significant economic impact on a substantial number of small entities and that preparation of a regulatory flexibility analysis is not warranted.

VI. Review Under the Paperwork Reduction Act

The information collection requirements proposed in this Notice have been submitted to OMB in accordance with section 3504(b) of the Paperwork Reduction Act, Public Law 96–511, 94 Stat. 2812 (44 U.S.C. 3501 *et seq.*), and procedures implementing that Act (5 CFR 1320.1 *et seq.*).

VII. Review Under National Environmental Policy Act

Pursuant to the requirements of the National Environmental Policy Act of 1969, Public Law 91–190, 83 Stat. 852 (42 U.S.C. 4321 et seq.), DOE published a Notice of Availability of an Environmental Assessment (EA) of the entire Title III program on March 12, 1979, in the Federal Register, 44 FR 13554. Based on this assessment, DOE determined that the EPCA title III program did not constitute a major Federal action significantly affecting the quality of the human environment, and that, therefore, no Environmental Impact Statement (EIS) was required.

DOE has reviewed the environmental impacts for the program amendment issued today. It is the DOE judgment that the program amendment will result in no environmental impacts in addition to those previously analyzed for this program. It is, accordingly, the DOE determination that the environmental impacts of the program as modified by today's amendment have been adequately analyzed in the March 1979 EA and that these impacts are not significant. Hence, the previous negative determination is still applicable, and no additional EA or EIS is required.

VIII. Review Under Executive Order 12612

Executive Order 12612 requires that regulations be reviewed for any substantial direct effects on States, on the relationship between the National Government and the States, or in the distribution of power among various levels of Government. If there are sufficient substantial direct effects, the Executive Order requires preparation of a Federalism assessment to be used in decisions by senior policymakers in promulgating or implementing the regulation.

Today's regulatory amendments are intended to simplify the management of the program by providing the States with clearer, more specific guidance in a number of areas and greater flexibility in other areas. They will not, therefore, have a substantial direct effect on the traditional rights and prerogatives of States in relationship to the Federal Government.

IX. Review Under the Federal Energy Administration Act

The NOPR was submitted for comment to the Administrator of the Environmental Protection Agency under section 7(c)(2) of the Federal Energy Administration Act, as amended, 15 U.S.C. 766(c)(2). The Administrator did not submit any comments.

X. Catalog of Federal Domestic Assistance

The Catalog of Federal Domestic Assistance number for the Grant Program for Schools and Hospitals is 81.052.

List of Subjects in 10 CFR Part 455

Buildings, energy conservation, grant programs-energy, health facilities, hospitals, reporting and recordkeeping requirements, schools, and technical assistance.

In consideration of the foregoing, DOE hereby amends Chapter II, title 10, Code of Federal Regulations, as set forth below:

Issued in Washington, DC on February 5, 1993.

Robert L. San Martin,

Acting Assistant Secretary, Conservation and Renewable Energy.

Part 455 of chapter II, title 10, Code of Federal Regulations is revised to read as set forth below:

PART 455—GRANT PROGRAMS FOR SCHOOLS AND HOSPITALS AND BUILDINGS OWNED BY UNITS OF LOCAL GOVERNMENT AND PUBLIC CARE INSTITUTIONS

Subpart A—General Provisions

Sec.
455.1 Purpose and scope.
455.2 Definitions.
455.3 Administration of grants.
455.4 Recordkeeping.
455.5 Suspension and termination of grants.

Subpart B—State Plan Development and Approval

455.20 Contents of State Plan.
455.21 Submission and approval of State Plans and State Plan amendments.

Subpart C—Allocation of Appropriations Among the States

455.30 Allocation of funds.
455.31 Allocation formulas.
455.32 Reallocation of funds.

Subpart D—Preliminary Energy Audit and Energy Audit Grants [Reserved]

Subpart E—Technical Assistance Programs for Schools, Hospitals, Units of Local Government, and Public Care Institutions

455.60 Purpose.
455.61 Eligibility.
455.62 Contents of a technical assistance program.
455.63 Cost-effectiveness testing.
455.64 Life-cycle cost methodology.

Subpart F—Energy Conservation Measures for Schools and Hospitals

455.70 Purpose.
455.71 Eligibility.
455.72 Scope of the grant.

Subpart G—State Administrative Expenses

455.80 Purpose.
455.81 Eligibility.
455.82 Scope of the grant.

Subpart H—State Grants for Technical Assistance, Program Assistance, and Marketing

455.90 Purpose.
455.91 Eligibility.
455.92 State technical assistance awards.

Subpart I—Cost Sharing

455.100 Limits to Federal share.
455.101 Borrowing the non-Federal share/title to equipment.
455.102 Energy conservation measure cost-share credit.
455.103 Requirements for applications for credit.
455.104 Rebates from utilities and other entities.

Subpart J—Applicant Responsibilities—Grants to Institutions and Coordinating Agencies

455.110 Grant application submittals for technical assistance and energy conservation measures.
455.111 Applicant certifications for technical assistance and energy conservation measure grants to institutions and coordinating agencies.
455.112 Davis-Bacon wage rate requirement.
455.113 Grantee records and reports for technical assistance and energy conservation measure grants to institutions and coordinating agencies.

Subpart K—Applicant Responsibilities—Grants to States

455.120 Grant applications for State administrative expenses.
455.121 Grant applications for State technical assistance, program assistance, and marketing programs.
455.122 Applicant certifications for State grants for technical assistance, program assistance, and marketing.
455.123 Grantee records and reports for State grants for administrative expenses, technical assistance, program assistance, and marketing.

Subpart L—State Responsibilities

455.130 State evaluation of grant applications.
455.131 State ranking of grant applications.
455.132 State evaluation of requests for severe hardship assistance.
455.133 Forwarding of applications from institutions and coordinating agencies for technical assistance and energy conservation measure grants.
455.134 Forwarding of applications for State grants for technical assistance, program assistance, and marketing.
455.135 State liaison, monitoring, and reporting.

Subpart M—Grant Awards

455.140 Approval of applications from institutions and coordinating agencies for technical assistance and energy conservation measures.
455.141 Grant awards for units of local government, public care institutions, and coordinating agencies.
455.142 Grant awards for schools, hospitals, and coordinating agencies.
455.143 Grant awards for State administrative expenses.
455.144 Grant awards for State programs to provide technical assistance, program assistance, and marketing.

Subpart N—Administrative Review

455.150 Right to administrative review.
455.151 Notice requesting administrative review.
455.152 Transmittal of record on review.
455.153 Review by the Deputy Assistant Secretary.
455.154 Discretionary review by the Assistant Secretary.
455.155 Finality of decision.

Authority: 42 U.S.C. 6371 *et seq.*, and 42 U.S.C. 7101 *et seq.*

Subpart A—General Provisions

§ 455.1 Purpose and scope.

(a) This part establishes programs of financial assistance pursuant to Title III of the Energy Policy and Conservation Act, as amended, 42 U.S.C. 6371 *et seq.*

(b) This part authorizes grants to States or to public or non-profit schools and hospitals to assist them in conducting preliminary energy audits and energy audits, in identifying and implementing energy conservation maintenance and operating procedures, and in evaluating, acquiring, and installing energy conservation measures, including renewable resource measures, to reduce the energy use and anticipated energy costs of buildings owned by schools and hospitals.

(c) This part also authorizes grants to States or units of local government and public care institutions to assist them in conducting preliminary energy audits

and energy audits, in identifying and implementing energy conservation maintenance and operating procedures, and in evaluating energy conservation measures, including renewable resource measures, to reduce the energy use and anticipated energy costs of buildings owned by units of local government and public care institutions.

§ 455.2 Definitions.

Act, as used in this part, means the Energy Policy and Conservation Act, Public Law 94–163, 89 Stat. 871 (42 U.S.C. 6201, *et seq.*), as amended by title III of the National Energy Conservation Policy Act, Public Law 95–619, 92 Stat. 3238 (42 U.S.C. 6371), and the State Energy Efficiency Programs Improvement Act of 1990, Public Law 101–440, 104 Stat. 1011.

Assistant Secretary means the Assistant Secretary for Conservation and Renewable Energy or any official to whom the Assistant Secretary's functions may be redelegated by the Secretary.

Auditor means any person who is qualified in accordance with 10 CFR 450.44 and with State requirements pursuant to § 455.20(k), to conduct an energy audit.

Building means any structure, including a group of closely situated structural units that are centrally metered or served by a central utility plant, or an eligible portion thereof, the construction of which was completed on or before May 1, 1989, which includes a heating or cooling system, or both.

Civil rights requirements means civil rights responsibilities of applicants and grantees pursuant to the Nondiscrimination in Federally Assisted Programs regulation of the Department of Energy (10 CFR part 1040).

Complex means a closely situated group of buildings on a contiguous site such as a school or college campus or multibuilding hospital.

Construction completion means the date of issuance of an occupancy permit for a building or the date the building is ready for occupancy as determined by DOE.

Cooling degree days means the annual sum of the number of Fahrenheit degrees of each day's mean temperature above 65° for a given locality.

Coordinating agency means a State or any public or nonprofit organization legally constituted within a State which provides either administrative control or services for a group of institutions within a State and which acts on behalf of such institutions with respect to their participation in the program.

Deputy Assistant Secretary means the Deputy Assistant Secretary for Technical and Financial Assistance or any official to whom the Deputy Assistant Secretary's functions may be redelegated by the Assistant Secretary.

DOE means the Department of Energy.

Energy audit means a determination of the energy consumption characteristics of a building which:

(1) Identifies the type, size, and rate of energy consumption of such building and the major energy-using systems of such building;

(2) Determines appropriate energy conservation maintenance and operating procedures;

(3) Indicates the need, if any, for the acquisition and installation of energy conservation measures; and

(4) If paid for with financial assistance under this part, complies with 10 CFR 450.43.

Energy conservation maintenance and operating procedures means modifications in the maintenance and operations of a building and any installation therein which are designed to reduce the energy consumption in such building and which require no significant expenditure of funds, including, but not limited to:

(1) Effective operation and maintenance of ventilation systems and control of infiltration conditions, including:

(i) Repair of caulking or weatherstripping around windows and doors;

(ii) Reduction of outside air intake, shutting down ventilation systems in unoccupied areas, and shutting down ventilation systems when the building is not occupied; and

(iii) Assuring central or unitary ventilation controls, or both, are operating properly;

(2) Changes in the operation and maintenance of heating or cooling systems through:

(i) Lowering or raising indoor temperatures;

(ii) Locking thermostats;

(iii) Adjusting supply or heat transfer medium temperatures; and

(iv) Reducing or eliminating heating or cooling at night or at times when a building or complex is unoccupied;

(3) Changes in the operation and maintenance of lighting systems through:

(i) Reducing illumination levels;

(ii) Maximizing use of daylight;

(iii) Using higher efficiency lamps; and

(iv) Reducing or eliminating evening cleaning of buildings;

(4) Changes in the operation and maintenance of water systems through:

(i) Repairing leaks;

(ii) Reducing the quantity of water used, e.g., using flow restrictors;

(iii) Lowering settings for hot water temperatures; and

(iv) Raising settings for chilled water temperatures;

(5) Changes in the maintenance and operating procedures of the building's mechanical systems through:

(i) Cleaning equipment;

(ii) Adjusting air/fuel ratio;

(iii) Monitoring combustion;

(iv) Adjusting fan, motor, or belt drive systems;

(v) Maintaining steam traps; and

(vi) Repairing distribution pipe insulation; and

(6) Such other actions relating to operations and maintenance procedures as the State may determine useful or necessary. In general, energy conservation maintenance and operating procedures involve cleaning, repairing or adjusting existing equipment rather than acquiring new equipment.

Energy conservation measure means an installation or modification of an installation in a building which is primarily intended to maintain (in the case of load management systems) or reduce energy consumption and reduce energy costs, or allow the use of an alternative energy source, including, but not limited to:

(1) Insulation of the building structure and systems within the building;

(2) Storm windows and doors, multiglazed windows and doors, heat-absorbing or heat-reflective glazed and coated windows and door systems, additional glazing, reductions in glass area, and other window and door systems modifications;

(3) Automatic energy control systems which would reduce energy consumption;

(4) Load management systems which would shift demand for energy from peak hours to hours of low demand and lower cost;

(5) Equipment required to operate variable steam, hydraulic, and ventilating systems adjusted by automatic energy control systems;

(6) Active or passive solar space heating or cooling systems, solar electric generating systems, or any combination thereof;

(7) Active or passive solar water heating systems;

(8) Furnace or utility plant and distribution system modifications including:

(i) Replacement burners, furnaces, boilers, or any combination thereof which substantially increase the energy efficiency of the heating system;

(ii) Devices for modifying flue openings which will increase the energy efficiency of the heating system;

(iii) Electrical or mechanical furnace ignition systems which replace standing gas pilot lights; and

(iv) Utility plant system conversion measures including conversion of existing oil- and gas-fired boiler installations to alternative energy sources;

(9) Addition of caulking and weatherstripping;

(10) Replacement or modification of lighting fixtures (including exterior light fixtures which are physically attached to, or connected to, the building) to increase the energy efficiency of the lighting system without increasing the overall illumination of a facility, unless such increase in illumination is necessary to conform to any applicable State or local building code or, if no such code applies, the increase is considered appropriate by DOE;

(11) Energy recovery systems;

(12) Cogeneration systems which produce steam or forms of energy such as heat as well as electricity for use primarily within a building or a complex of buildings owned by an eligible institution and which meet such fuel efficiency requirements as DOE may by rule prescribe;

(13) Such other measures as DOE identifies by rule for purposes of this part as set forth in subpart D of 10 CFR part 450; and

(14) Such other measures as a grant applicant shows will save a substantial amount of energy and as are identified in an energy audit or energy use evaluation in accordance with § 455.20(k) or a technical assistance report in accordance with § 455.62.

Energy use evaluation means a determination of:

(1) Whether the building is a school facility, hospital facility, or a building owned and primarily occupied and used throughout the year by a unit of local government or by a public care institution.

(2) The name and address of the owner of record, indicating whether owned by a public institution, private nonprofit institution, or an Indian tribe;

(3) The building's potential suitability for renewable resource applications;

(4) Major changes in functional use or mode of operation planned in the next 15 years, such as demolition, disposal, rehabilitation, or conversion from office to warehouse;

(5) Appropriate energy conservation maintenance and operating procedures which have been implemented for the building;

(6) The need, if any, for the acquisition and installation of energy conservation measures including an assessment of the estimated costs and energy and cost savings likely to result from the purchase and installation of one or more energy conservation measures and an evaluation of the need and potential for retrofit based on consideration of one or more of the following:

(i) An energy use index or indices, for example, Btu's per gross square foot per year;

(ii) An energy cost index or indices, for example, annual energy costs per gross square foot; or

(iii) The physical characteristics of the building envelope and major energy-using systems; and

(7) Such other information as the State has determined useful or necessary, in accordance with § 455.20(k).

Fuel means any commercial source of energy used within the building or complex being surveyed such as natural gas, fuel oil, electricity, or coal.

Governor means the chief executive officer of a State including the Mayor of the District of Columbia or a person duly designated in writing by the Governor to act on her or his behalf.

Grant program cycle means the period of time specified by DOE which relates to the fiscal year or years for which monies are appropriated for grants under this part, during which one complete cycle of DOE grant activity occurs including fund allocations to the States; applications receipt, review, approval, or disapproval; and award of grants by DOE but which does not include the grantee's performance period.

Grantee means the entity or organization named in the Notice of Financial Assistance Award as the recipient of the grant.

Gross square feet means the sum of all heated or cooled floor areas enclosed in a building, calculated from the outside dimensions or from the centerline of common walls.

Heating or cooling system means any mechanical system for heating, cooling, or ventilating areas of a building including a system of through-the-wall air conditioning units.

Heating degree days means the annual sum of the number of Fahrenheit degrees for each day's mean temperature below 65° for a given locality.

Hospital means a public or nonprofit institution which is a general hospital, tuberculosis hospital, or any other type of hospital other than a hospital furnishing primarily domiciliary care and which is duly authorized to provide hospital services under the laws of the State in which it is situated.

Hospital facilities means buildings housing a hospital and related facilities including laboratories, laundries, outpatient departments, nurses' residence and training facilities, and central service facilities operated in connection with a hospital; it also includes buildings containing education or training facilities for health profession personnel operated as an integral part of a hospital.

Indian tribe means any tribe, band, nation, or other organized group or community of Indians including any Alaska native village or regional or village corporation, as defined in or established pursuant to, the Alaska Native Claims Settlement Act, Public Law 92–203; 85 Stat. 688, which (a) is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians; or (b) is located on, or in proximity to, a Federal or State reservation or rancheria.

Load management system means a device or devices which are designed to shift energy use to hours of low demand in order to reduce energy costs and which do not cause more energy to be used than was used before their installation.

Local educational agency means a public board of education or other public authority or a nonprofit institution legally constituted within, or otherwise recognized by, a State either for administrative control or direction of, or to perform administrative services for, a group of schools within a State.

Maintenance means activities undertaken in a building to assure that equipment and energy-using systems operate effectively and efficiently.

Marketing means a program or activity managed or performed by the State including but not limited to:

(1) Obtaining non-Federal funds to finance energy conservation measures consistent with this part;

(2) Making site visits to school and hospital officials to review program opportunities;

(3) Giving presentations to groups such as school or hospital board officials and personnel; and

(4) Preparing and disseminating articles in publications directed to school and hospital personnel.

Native American means a person who is a member of an Indian tribe.

Non-Federal funds means financing sources obtained or arranged for by a State as a result of the State program(s) pursuant to § 455.20(j), to be used to pay for energy conservation measures for institutions eligible under this part, and

includes petroleum violation escrow funds except for those funds required to be treated as if they were Federal funds by statute, court order, or settlement agreement.

Operating means the operation of equipment and energy-using systems in a building to achieve or maintain specified levels of environmental conditions of service.

Owned or *owns* means property interest including without limitation a leasehold interest which is or shall become a fee simple title in a building or complex.

Preliminary energy audit means a determination of the energy consumption characteristics of a building including the size, type, rate of energy consumption, and major energy-using systems of such building which if paid for with financial assistance under this part, complies with 10 CFR 450.42.

Primarily occupied means that in excess of 50 percent of a building's square footage or time of occupancy is occupied by a public care institution or an office or agency of a unit of local government.

Program assistance means a program or activity managed or performed by the State and designed to provide support to eligible institutions to help ensure the effectiveness of energy conservation programs carried out consistent with this part including such relevant activities as:

(1) Evaluating the services and reports of consulting engineers;

(2) Training school or hospital personnel to perform energy accounting and to identify and implement energy conservation maintenance and operating procedures;

(3) Monitoring the implementation and operation of energy conservation measures; and

(4) Aiding in the procurement of energy-efficient equipment.

Public care institution means a public or nonprofit institution which owns:

(1) A facility for long-term care, rehabilitation facility, or public health center, as described in section 1624 of the Public Health Service Act (42 U.S.C. 300s–3; 88 Stat. 2270); or

(2) A residential child care center which is an institution, other than a foster home, operated by a public or nonprofit institution. It is primarily intended to provide full-time residential care, with an average length of stay of at least 30 days, for at least 10 minor persons who are in the care of such institution as a result of a finding of abandonment or neglect or of being persons in need of treatment or supervision.

Public or nonprofit institution means an institution owned and operated by:

(1) A State, a political subdivision of a State, or an agency or instrumentality of either; or

(2) A school or hospital which is, or would be in the case of such entities situated in American Samoa, Guam, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands, exempt from income tax under section 501(c)(3) of the Internal Revenue Code of 1954; or

(3) A unit of local government or public care institution which is, or would be in the case of such entities situated in American Samoa, Guam, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands, exempt from income tax under section 501(c)(3) or 501(c)(4) of the Internal Revenue Code of 1954.

Renewable resource energy conservation measure means an energy conservation measure which produces at least 50 percent of its Btu's from a non-depletable energy source.

School means a public or nonprofit institution which:

(1) Provides, and is legally authorized to provide, elementary education or secondary education, or both, on a day or residential basis;

(2) Provides, and is legally authorized to provide, a program of education beyond secondary education, on a day or residential basis and:

(i) Admits as students only persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such certificate;

(ii) Is accredited by a nationally recognized accrediting agency or association; and

(iii) Provides an educational program for which it awards a bachelor's degree or higher degree or provides not less than a 2-year program which is acceptable for full credit toward such a degree at any institution which meets the preceding requirements and which provides such a program;

(3) Provides not less than a 1-year program of training to prepare students for gainful employment in a recognized occupation and which meets the provisions cited in paragraph (2), and subparagraphs (2)(i), and (2)(ii) of this definition; or

(4) Is a local educational agency.

School facilities means buildings housing classrooms, laboratories, dormitories, administrative facilities, athletic facilities, or related facilities operated in connection with a school.

Secretary means the Secretary of the Department of Energy or his/her designee.

State means, in addition to the several States of the Union, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands.

State energy agency means the State agency responsible for developing State energy conservation plans pursuant to section 362 of the Energy Policy and Conservation Act (42 U.S.C. 6322) or, if no such agency exists, a State agency designated by the Governor of such State to prepare and submit the State Plan required under section 394 of the Energy Policy and Conservation Act.

State hospital facilities agency means an existing agency which is broadly representative of the public hospitals and the nonprofit hospitals or, if no such agency exists, an agency designated by the Governor of such State which conforms to the requirements of this definition.

State school facilities agency means an existing agency which is broadly representative of public institutions of higher education, nonprofit institutions of higher education, public elementary and secondary schools, nonprofit elementary and secondary schools, public vocational education institutions, nonprofit vocational education institutions, and the interests of handicapped persons in a State or, if no such agency exists, an agency which is designated by the Governor of such State which conforms to the requirements of this definition.

Support office director means the Director of the DOE field support office with the responsibility for grant administration or any official to whom that function may be redelegated.

Technical assistance means: (1) The conduct of specialized studies to identify and specify energy savings or energy cost savings that are likely to be realized as a result of the modification of maintenance and operating procedures in a building, the acquisition and installation of one or more specified energy conservation measures in a building, or both; and

(2) the planning or administration of such specialized studies. For schools and hospitals which are eligible to receive grants to carry out energy conservation measures, the term also means the planning or administration of specific remodeling, renovation, repair, replacement, or insulation projects related to the installation of energy conservation or renewable resource measures in a building.

Technical assistance program update means a brief revision to an existing technical assistance program report designed to provide current information such as that relating to energy use, equipment costs, and other data needed to substantiate an application for an energy conservation measure grant. Such an update shall be limited to the particular measures included in the related grant application together with any relevant data regarding interactions or relationships to previously installed energy conservation measures.

Unit of local government means the government of a county, municipality, parish, borough, or township which is a unit of general purpose government below the State (determined on the basis of the same principles as are used by the Bureau of the Census for general statistical purposes) and the District of Columbia. Such term also means the recognized governing body of an Indian tribe which governing body performs substantial governmental functions and includes libraries which serve all residents of a political subdivision below the State level (such as a community, district, or region) free of charge and which derive at least 40 percent of their operating funds from tax revenues of a taxing authority below the State level.

§ 455.3 Administration of grants.

Grants provided under this part shall comply with applicable law, regulation, or procedure including, without limitation, the requirements of:

(a) The DOE Financial Assistance Rules (10 CFR part 600 as amended) except as otherwise provided in this rule;

(b) Executive Order 12372 entitled "Intergovernmental Review of Federal Programs" (48 FR 3130, January 24, 1983; 3 CFR, 1982 Comp., p. 197) and the DOE regulation implementing this Executive Order entitled "Intergovernmental Review of Department of Energy Programs and Activities" (10 CFR part 1005);

(c) Office of Management and Budget Circular A–97 entitled "Rules and Regulations Permitting Federal Agencies to Provide Specified or Technical Services to State and Local Units of Government under title III of the Inter-Governmental Coordination Act of 1968" available from the Office of Management and Budget, Office of Publication Services, 725 17th Street, NW., Washington, DC 20503;

(d) DOE regulation entitled "Nondiscrimination in Federally Assisted Programs" (10 CFR part 1040) which implements the following public laws: Title VI of the Civil Rights Act of 1964; section 16 of the Federal Energy Administration Act of 1974; section 401 of the Energy Reorganization Act of 1974; title IX of the Education Amendments of 1972; The Age Discrimination Act of 1975; and section 504 of the Rehabilitation Act of 1973; and

(e) Such other procedures applicable to this part as DOE may from time to time prescribe for the administration of financial assistance.

§ 455.4 Recordkeeping.

Each State or other entity within a State receiving financial assistance under this part shall make and retain records required and specified by the DOE Financial Assistance Rules, 10 CFR part 600, and this part.

§ 455.5 Suspension and termination of grants.

Suspension and termination procedures shall be as set forth in the DOE Financial Assistance Rules, 10 CFR part 600.

Subpart B—State Plan Development and Approval

§ 455.20 Contents of State Plan.

Each State shall develop and submit to DOE a State Plan for technical assistance programs and energy conservation measures, including renewable resource measures and, to the extent appropriate, program assistance, and/or marketing. The State Plan shall include:

(a) A statement setting forth the procedures by which the views of eligible institutions or coordinating agencies representing such institutions, or both, were solicited and considered during development of the State Plan and any amendment to a State Plan;

(b) The procedures the State will follow to notify eligible institutions and coordinating agencies of the content of the approved State Plan or any approved amendment to a State Plan;

(c) The procedures the State will follow to notify eligible institutions and coordinating agencies of the availability (each funding cycle) of funding under this program and related funding available from non-Federal sources to fund technical assistance programs and energy conservation measures consistent with this part;

(d) The procedures for submittal of grant applications to the State;

(e) The procedures to be used by the State for evaluating and ranking technical assistance and energy conservation measure grant applications pursuant to § 455.130 and § 455.131, including the weights assigned to each criterion set forth in §§ 455.131 (c)(1), (c)(2), (c)(3), (c)(4) and (c)(5). In addition, the State shall determine the order of priority given to fuel types that include oil, natural gas, and electricity, under § 455.131(c)(2);

(f) The procedures that the State will follow to insure that funds will be allocated equitably among eligible applicants within the State including procedures to insure that funds will not be allocated on the basis of size or type of institution, but rather on the basis of relative need, taking into account such factors as cost, energy consumption, and energy savings, in accordance with § 455.131;

(g) The procedures that the States will follow for identifying schools and hospitals experiencing severe hardship and for apportioning the funds that are available for schools and hospitals in a case of severe hardship. Such policies and procedures shall be in accordance with § 455.132;

(h) A statement setting forth the extent to which, and by which methods, the State will encourage utilization of solar space heating, cooling and electric systems, and solar water heating systems;

(i) The procedures to assure that all financial assistance under this part will be expended in compliance with the requirements of the State Plan, in compliance with the requirements of this part, and in coordination with other State and Federal energy conservation programs;

(j) If a State is eligible and elects to use up to 100 percent of the funds provided by DOE under this part for any fiscal year for program and technical assistance and/or up to 50 percent of such funds for marketing:

(1) A description of each activity the State proposes, including the procedures for program operation, monitoring, and evaluation;

(2) The level of funding to be used for each program and the source of those funds;

(3) The amount of the State's allocated funds that the State proposes to use for each;

(4) A description of the non-Federal financing mechanisms to be used to fund energy conservation measures in the State during the fiscal year;

(5) A description of the evaluation/selection criteria to be used by the State in determining which institutions receive funding for energy conservation measures;

(6) The procedures for assuring that all segments of the State's eligible institutions, including religiously affiliated institutions receive an equitable share of the assistance provided both for program and technical

assistance, marketing, and energy conservation measures;

(7) A description of how the State will track: the amount of total available funds by source; the amount of funds obligated against those funds; and any limits on types of institutions eligible for particular funding sources; and

(8) The procedures for assisting institutions which initially receive program, technical, or marketing assistance (as part of the State's special program(s)) in later participating in the State's program(s) to provide energy conservation measure funding;

(k) The requirements for an energy audit or an energy use evaluation, and the requirements for qualifications for auditors or persons who will conduct energy use evaluations in the State;

(l) With regard to energy conservation maintenance and operating procedures:

(1) The procedures to insure implementation of energy conservation maintenance and operating procedures in those buildings for which financial assistance is requested under this part;

(2) A provision that all maintenance and operating procedure changes recommended in an energy audit pursuant to § 455.20(k), or in a technical assistance report under § 455.62, or a combination of these are implemented as provided under this part; or

(3) An assurance that the maintenance and operating procedures will be implemented in the future, or a reasonable justification for not implementing such procedures, as appropriate;

(m) The procedures to assure that financial assistance under this part will be used to supplement, and not to supplant, State, local or other funds, including at least:

(1) The screening of applicants for eligibility for available State funds;

(2) The identification of applicants which are seeking or have obtained private sector funds; and,

(3) Limiting or excluding (at the option of the State) the availability of financial assistance under this part for funding particular measures for which funding is being provided by other sources in the State (such as utility rebates) together with any requirements for potential applicants to first seek other sources of funding and document the results of that attempt before seeking financial assistance under this part and a description of the State's plan to assist potential applicants in identifying and obtaining other sources of funding;

(n) The procedures for determining that technical assistance programs performed without the use of Federal funds and used as the basis for energy conservation measure grant applications have been performed in compliance with the requirements of § 455.62, for the purposes of satisfying the eligibility requirements contained in § 455.71(a)(3);

(o) The State's policy regarding reasonable selection of energy conservation measures for study in a technical assistance program including any restrictions based on category of building or on groups of structures where measures may, or may not, be appropriate for all the structures and any additional State requirements for the conduct of such a program;

(p) The procedures for State management, monitoring, and evaluation of technical assistance programs and energy conservation measures receiving financial assistance under this part. This includes any State requirements for hospital certifications from a State agency with descriptions of the review procedures and coordination process applicable in such cases. If there is no school facilities agency in the State, or if the existing agency does not certify all types of schools, it also includes any State requirements for an alternative review and certification process for schools;

(q) The circumstances under which the State requires an updated technical assistance program report to accompany an application for an energy conservation measure grant and the scope and contents of such an update;

(r) A description of the State's policies for establishing and insuring compliance with qualifications for technical assistance analysts. Such policies shall require that technical assistance analysts be free from financial interests which may conflict with the proper performance of their duties and have experience in energy conservation and:

(1) Be a registered professional engineer licensed under the regulatory authority of the State;

(2) Be an architect-engineer team, the principal members of which are licensed under the regulatory authority of the State; or

(3) Be otherwise qualified in accordance with such criteria as the State may prescribe in its State Plan to insure that individuals conducting technical assistance programs possess the appropriate training and experience in building energy systems;

(s) The circumstances under which the State will or will not consider accepting applications for technical assistance programs or energy conservation measures which were included in earlier approved grant awards but which were not implemented and for which no funds were expended after the original grant award;

(t) A statement setting forth:

(1) An estimate of energy savings which may result from the modification of maintenance and operating procedures and installation of energy conservation measures;

(2) A recommendation as to the types of energy conservation measures considered appropriate within the State; and

(3) An estimate of the costs of carrying out technical assistance and energy conservation measure programs;

(u) For purposes of the technical assistance program pursuant to § 455.62:

(1) A statement setting forth uniform conversion factors to be used by all grant applicants in the technical assistance analysis for conversion of fuels to Btu equivalents. For the conversion of kilowatt hours to Btus, the State may use 3,413, representing consumption at the consumer's end, or 11,600, representing consumption at the producer's end, or may assign 3,413 to some types of energy conservation measures and 11,600 to other types of measures in which case the State shall specify the conversion factor to be used for each type of measure, providing a rationale and citing the sources used in making this decision, and the State shall always apply the specified factor consistently to all ECMs of a particular type;

(2) A statement setting forth the cost-effectiveness testing approach to be used to evaluate energy conservation measures pursuant to § 455.63. States may select either the simple payback approach or the life-cycle costing approach. Only one approach may be used for all technical assistance programs in the State. If the State elects to use the life-cycle costing approach, it must specify, consistent with § 455.64(g), whether it will use DOE-provided or its own energy cost escalation rate or annual discount rate, together with any other procedures required to be used (in addition to those specified in § 455.64); and

(3) A statement setting forth that 50 percent (or a higher percent) of total cost savings (used in calculating cost effectiveness pursuant to § 455.63(a)(1) for simple payback, or § 455.64(c) for life-cycle costing) must be from the cost of the energy to be saved.

(v) For any coordinating agency, a description of how it will operate including but not limited to:

(1) Name and address;

(2) Type of institutions covered;

(3) Application processing procedures;

(4) Whether TA applications, ECM applications, or both are covered;

(5) Intended schedule for soliciting and processing applications;

(6) Any special provisions for religiously affiliated institutions;

(7) Nature of subagreement to be used with institutions;

(8) Whether TA or ECM contractors selected by the coordinating agency will be offered incident to, or as a condition in, subagreements; and

(9) Other significant policies and procedures;

(w) If a State elects to allow credit toward the cost share for an energy conservation measure for the costs of technical assistance programs, technical assistance program updates, or energy conservation measures previously incurred and wholly paid for with non-Federal funds, the policies regarding such credit, including any time limits for the age of the earlier-funded work being proposed for credit; and

(x) The limit to the Federal share to be provided to applicants in the State if a State elects to provide less than a 50 percent Federal share to its applicants that do not qualify for severe hardship.

§ 455.21 Submission and approval of State Plans and State Plan amendments.

(a) Proposed State Plans or Plan amendments necessitated by a change in regulations shall be submitted to DOE within 90 days of the effective date of this subpart or any amended regulations. Upon request by a State, and for good cause shown, DOE may grant an extension of time.

(b) The Support Office Director shall, within 60 days of receipt of a proposed State Plan, review each plan and, if it is reasonable and found to conform to the requirements of this part, approve the State Plan. If the Support Office Director does not disapprove a State Plan within the 60-day period, the State Plan will be deemed to have been approved.

(c) If the Support Office Director determines that a proposed State Plan fails to comply with the requirements of this part or is not reasonable, DOE shall return the plan to the State with a statement setting forth the reasons for disapproval.

(d) Except for State Plan amendments covered by paragraph (a) of this section, if a State wishes to deviate from its approved State Plan, the State must submit and obtain DOE approval of the State Plan amendment.

(e) The Support Office Director shall, within 60 days or less of receipt of a proposed State Plan amendment review each amendment and, if it is found to conform to the requirements of this part, approve the amendment. If the Support Office Director determines that a proposed State Plan amendment fails to comply with the requirements of this part, or is not reasonable, DOE shall return the amendment to the State with a statement setting forth the reasons for disapproval.

Subpart C—Allocation of Appropriations Among the States

§ 455.30 Allocation of funds.

(a) DOE will allocate available funds among the States for two purposes: to award grants to schools, hospitals, units of local government, and public care institutions and coordinating agencies representing them to implement technical assistance and energy conservation measures grant programs and to award grants to eligible States for administrative expenses, technical assistance programs, program assistance, and marketing expenses in accordance with this part.

(b) DOE shall notify each Governor of the total amount allocated for grants within the State for any grant program cycle:

(1) For schools and hospitals, the allocation amount shall be for technical assistance programs, subject to any limitation placed on technical assistance, and energy conservation measures;

(2) For States that are eligible pursuant to § 455.91, up to 100 percent of the funds allocated to the State by DOE may be used for technical assistance programs and/or for program assistance and up to 50 percent of the funds allocated to the State by DOE may be used for marketing as defined in § 455.2;

(3) For States eligible under § 455.81, a portion of the allocation may be used for a grant to the State for administrative expenses as described in § 455.120;

(4) For unit of local government and public care institutions, the allocation amount shall be solely for technical assistance programs; and

(5) For coordinating agencies, the allocation amount shall be for either technical assistance programs subject to any limitation placed on technical assistance, or energy conservation measures, or both depending on how the coordinating agency elects to operate.

(c) DOE shall notify each Governor of the period for which funds allocated for a grant program cycle will be made available for grants within the State.

(d) Each State shall make available up to 10 percent of its allocation for schools and hospitals in each grant program cycle to provide financial assistance, not to exceed a 90 percent Federal share, for technical assistance programs and energy conservation measures for schools and hospitals determined to be in a class of severe hardship. Such determinations shall be made in accordance with § 455.132.

§ 455.31 Allocation formulas.

(a) Financial assistance for conducting technical assistance programs for units of local government and public care institutions shall be allocated among the States by multiplying the sum available by the allocation factor set forth in paragraph (c) of this section.

(b) Financial assistance for conducting technical assistance programs and acquiring and installing energy conservation measures, including renewable resource measures, for schools and hospitals, shall be allocated among the States by multiplying the sum available by the allocation factor set forth in paragraph (c) of this section.

(c) The allocation factor (K) shall be determined by the formula:

$$K = \frac{0.07}{N} + 0.1\,\frac{(Sfc)}{(Nfc)} + 0.83\,\frac{(SP)(SC)}{(NPC)}$$

where, as determined by DOE:

(1) Sfc is the projected average retail cost per million Btu's of energy consumed within the region in which the State is located as contained in current regional energy cost projections obtained from DOE.

(2) Nfc is the summation of the Sfc numerators for all States;

(3) N is the total number of eligible States;

(4) SP is the population of the State;

(5) SC is the sum of the State's heating and cooling degree days; and

(6) NPC is the summation of the (SP)(SC) numerators for all States.

(d) Except for the District of Columbia, Puerto Rico, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands, no allocation available to any State may be less than 0.5 percent of all amounts allocated in any grant program cycle. No State will be allocated more than 10 percent of the funds allocated in any grant program cycle.

§ 455.32 Reallocation of funds.

(a) If a State Plan has not been approved and implemented by a State by the close of the period for which allocated funds are available as set forth in the notice issued by DOE pursuant to § 455.30(c), funds allocated to that State for technical assistance and energy conservation measures will be

reallocated among all States for the next grant program cycle, if available.

(b) Funds which have been allocated to States in a grant program cycle but which have not been obligated to eligible State, school, or hospital grant applicants by the end of that cycle shall be reallocated by DOE among all States in the next grant program cycle.

(c) Funds which become available due to deobligations resulting from funds returned by grantees due to cost underruns or scope-of-work reductions on completed projects shall be reallocated by DOE among all States in the next grant program cycle.

(d) Funds which become available because of declined grants to schools and hospitals within a State may be reobligated to other eligible applicants in the State until the December 31 following the close of the cycle for which the funds were allocated to the State. Such funds which have not been reobligated by that deadline shall be reallocated by DOE among all States in the next grant program cycle.

(e) Funds which become available because of declined or deobligated financial assistance provided through coordinating agencies to schools and hospitals within a State may be reobligated to other eligible applicants in the State until the December 31 following the close of the cycle for which the funds were allocated to the coordinating agency. Such funds which have not been reobligated by that deadline shall be reallocated by DOE among all States in the next grant program cycle.

(f) Funds granted to States for technical assistance, program assistance, and marketing pursuant to § 455.144 are subject to reallocation by DOE among all the States in the next program cycle if such funds are not committed by the State to their intended purposes by means of grants, contracts, or other legally binding obligations, or redirected to schools and hospitals grant applications pursuant to § 455.144(d), by the December 31 following the close of the cycle for which the funds were allocated to the State.

Subpart D—Preliminary Energy Audit and Energy Audit Grants [Reserved]

Subpart E—Technical Assistance Programs for Schools, Hospitals, Units of Local Government, and Public Care Institutions

§ 455.60 Purpose.

This subpart specifies what constitutes a technical assistance program eligible for financial assistance under this part and sets forth the eligibility criteria for schools, hospitals, units of local government, and public care institutions to receive grants for technical assistance to be performed in buildings owned by such institutions.

§ 455.61 Eligibility.

To be eligible to receive financial assistance for a technical assistance program, an applicant must:

(a) Be a school, hospital, unit of local government, public care institution, or coordinating agency representing them except that financial assistance for units of local government and public care institutions will be provided only for buildings which are owned and primarily occupied by offices or agencies of a unit of local government or public care institution and which are not intended for seasonal use and not utilized primarily as a school or hospital eligible for assistance under this program;

(b) Be located in a State which has an approved State Plan as described in subpart B of this part;

(c) Have conducted an energy audit or an energy use evaluation required pursuant to § 455.20(k) and adequate to estimate energy conservation potential for the building for which financial assistance is to be requested, subsequent to the most recent construction, reconfiguration, or utilization change which significantly modified energy use within the building;

(d) If an energy audit has been performed, give assurance that it has implemented all energy conservation maintenance and operating procedures required pursuant to § 455.20(k) or provide a written justification for not implementing them pursuant to § 455.20(l)(3); and

(e) Submit an application in accordance with the provisions of this part and the approved State Plan.

§ 455.62 Contents of a technical assistance program.

(a) The purpose of a technical assistance program is to provide a report based on an on-site analysis of the building which meets the requirements of this section and the State's procedures for implementing this section.

(b) A technical assistance program shall be designed to identify and document energy conservation maintenance and operating procedure changes and energy conservation measures in sufficient detail to support possible application for an energy conservation measure grant and to provide reviewers and decision makers handling such applications sufficient information upon which to base a judgment as to their reasonableness and a decision whether to pursue any or all of the recommended improvements.

(c) A technical assistance program shall be conducted by a technical assistance analyst who has the qualifications established in the State Plan in accordance with § 455.20(r).

(d) At the conclusion of a technical assistance program, the technical assistance analyst shall prepare a report which shall include:

(1) A description of building characteristics and energy data including:

(i) The results of the energy audit or energy use evaluation of the building together with a statement as to the accuracy and completeness of the energy audit or energy use evaluation data and recommendations;

(ii) The operation characteristics of energy-using systems; and

(iii) The estimated remaining useful life of the building;

(2) An analysis of the estimated energy consumption of the building, by fuel type in total Btus and Btu/sq.ft./yr., using conversion factors prescribed by the State in the State Plan, at optimum efficiency (assuming implementation of all energy conservation maintenance and operating procedures);

(3) A description and analysis of all identified energy conservation maintenance and operating procedure changes, if any, and energy conservation measures selected in accordance with the State Plan, including renewable resource measures, setting forth:

(i) A description of each energy conservation maintenance and operating procedure change and an estimate of the costs of adopting such energy conservation maintenance and operating procedure changes;

(ii) An estimate of the cost of design, acquisition and installation of each energy conservation measure, discussing pertinent assumptions as necessary;

(iii) Estimated useful life of each energy conservation measure;

(iv) An estimate of any increases or decreases in maintenance and operating costs that would result from each conservation measure, if relevant to the cost effectiveness test applicable under this part;

(v) An estimate of any significant salvage value or disposal cost of each energy conservation measure at the end of its useful life if relevant to the cost effectiveness test applicable under this part;

(vi) An estimate, supported by all data and assumptions used in arriving at the estimate, of the annual energy savings, the annual cost of energy to be saved,

and total annual cost savings using current energy prices including demand charges expected from each energy conservation maintenance and operating procedure change and the acquisition and installation of each energy conservation measure. In calculating the potential annual energy savings, annual cost of energy to be saved, or total annual cost savings of each energy conservation measure, including renewable resource measures, the technical assistance analyst shall:

(A) Assume that all energy savings obtained from energy conservation maintenance and operating procedures have been realized;

(B) Calculate the total annual energy savings, annual cost of energy to be saved, and total annual cost savings, by fuel type, expected to result from the acquisition and installation of the energy conservation measures, taking into account the interaction among the various measures;

(C) Calculate that portion of the total annual energy savings, annual cost of energy to be saved, and total annual cost savings, as determined in paragraph (d)(3)(vi)(B) of this section, attributable to each individual energy conservation measure; and

(D) Consider climate and other variables;

(vii) An analysis of the cost effectiveness of each energy conservation measure consistent with § 455.63 and, if applicable, § 455.64 of this part;

(viii) The estimated cost of the measure, which shall be the total cost for design and other professional service (excluding the cost of a technical assistance program), if any, and acquisition and installation costs. If required by the State in its State Plan, or if requested by the applicant, the technical assistance report shall provide a life-cycle cost analysis which is consistent with § 455.64 and states the discount and energy cost escalation rates that were used;

(ix) The simple payback period of each energy conservation measure, calculated pursuant to § 455.63(a);

(4) Energy use and cost data, actual or estimated, for each fuel type used for the prior 12-month period, by month, if possible;

(5) Documentation of demand charges paid by the institution for the prior 12-month period, by month if possible, when demand charges are included in current energy prices or when the technical assistance report recommends an energy conservation measure that shifts energy usage to periods of lower demand and cost; and

(6) A signed and dated certification that the technical assistance program has been conducted in accordance with the requirements of this section and that the data presented is accurate to the best of the technical assistance analyst's knowledge.

§ 455.63 Cost-effectiveness testing.

(a) This paragraph applies to calculation of the simple payback period of energy conservation measures.

(1) The simple payback period of each energy conservation measure (except measures to shift demand, or renewable resource measures) shall be calculated, taking into account the interactions among the various measures, by dividing the estimated total cost of the measure, as determined pursuant to § 455.62(d)(3)(ii), by the estimated annual cost savings accruing from the measure (adjusted for demand charges), as determined pursuant to § 455.62(d)(3)(vi), provided that:

(i) At least 50 percent of the annual cost savings used in this calculation shall be from the cost of the energy to be saved or a higher percent if required by a State in its State Plan pursuant to § 455.20(u)(3); and

(ii) No more than 50 percent of the annual cost savings used in this calculation shall be from other cost savings, such as those resulting from energy conservation maintenance and operating procedures related to particular energy conservation measures, or from changes in type of fuel used, or a lower percent if required by a State in its State Plan pursuant to § 455.20(u)(3).

(2) The simple payback period of each renewable resource energy conservation measure shall be calculated, taking into account the interactions among the various measures, by dividing the estimated total cost of the measure, as determined pursuant to § 455.62(d)(3)(ii), by the estimated annual cost savings accruing from the measure taking into account at least the annual cost of the non-renewable fuels displaced less the annual cost of the renewable fuel, if any, and the annual cost of any backup non-renewable fuel needed to operate the system, adjusted for demand charges, as determined pursuant to § 455.62(d)(3)(vi).

(3) The simple payback period of each energy conservation measure designed to shift demand to a period of lower demand and lower cost shall be calculated, taking into account the interactions among the various measures, by dividing the estimated total cost of the measure, as determined pursuant to § 455.62(d)(3)(ii), by the estimated annual cost savings accruing from the measure taking into account at least the annual cost of the energy used before the measure is installed less the estimated annual cost of the energy to be used after the measure is installed, adjusted for demand charges, as determined pursuant to § 455.62(d)(3)(vi).

(b) This paragraph applies, in addition to paragraph (a) of this section, if the State plan requires the cost effectiveness of an energy conservation measure to be determined by life-cycle cost analysis or if the applicant requests such an analysis.

(1) A life-cycle cost analysis, showing a savings-to-investment ratio greater than or equal to one over the useful life of the energy conservation measure or 15 years, whichever is less, shall be conducted in accordance with the requirements set forth in the State Plan pursuant to §§ 455.20(u)(2), 455.20(u)(3) and § 455.64.

(2) The resulting savings-to-investment ratio shall be used for the purpose of ranking applications.

§ 455.64 Life-cycle cost methodology.

(a) The life-cycle cost methodology under § 455.63(b) of this part is a systematic comparison of the relevant significant cost savings and costs associated with an energy conservation measure over its expected useful life, or other appropriate study period with future cost savings and costs discounted to present value. The format for displaying life-cycle costs shall be a savings-to-investment ratio.

(b) An energy conservation measure must be cost effective, and its savings-to-investment ratio must be greater than or equal to one no earlier than the end of the second year of the study period.

(c) A savings-to-investment ratio is the ratio of the present value of net cost savings attributable to an energy conservation measure to the present value of the net increase in investment, maintenance and operating, and replacement costs less salvage value or disposal cost attributable to that measure over a study period.

(d) Except for energy conservation measures to shift demand or to use renewable energy resources, the numerator of the savings-to-investment ratio shall include net cost savings, appropriately discounted and adjusted for energy cost escalation consistent with paragraph (g) of this section, subject to the limitation that the cost of the energy to be saved shall constitute at least 50 percent of the net cost savings unless the State specifies a higher percent in its State plan pursuant to § 455.20(u)(3).

(e) With respect to energy conservation measures to shift demand or to use renewable energy resources, the numerator of the savings-to-investment ratio shall be net cost savings appropriately discounted and adjusted for energy cost escalation consistent with paragraph (g) of this section.

(f) The study period for a life-cycle cost analysis, which may not exceed 15 years, shall be the useful life of the energy conservation measure or of the energy conservation measure with the longest life (for purposes of ranking buildings with multiple energy conservation measures).

(g) The discount rate must equal or exceed the discount rate annually provided by DOE under 10 CFR part 436. The energy cost escalation rates must not exceed those annually provided by DOE under 10 CFR part 436.

(h) Investment costs may be assumed to be a lump sum occurring at the beginning of the base year, or to the extent that there are future investment costs, discounted to present value.

(i) The cost of energy and maintenance and operating costs may be assumed to begin to accrue at the beginning of the base year or when they are actually projected to occur.

(j) It may be assumed that costs occur in a lump sum at any time within the year in which they are incurred.

Subpart F—Energy Conservation Measures for Schools and Hospitals

§ 455.70 Purpose.

This subpart sets forth the eligibility criteria for schools and hospitals to receive grants for energy conservation measures, including renewable resource measures, and the elements of an energy conservation measure program.

§ 455.71 Eligibility.

(a) To be eligible to receive financial assistance for an energy conservation measure, including renewable resource measures, an applicant must:

(1) Be a school, hospital, or coordinating agency representing them as defined in § 455.2;

(2) Be located in a State which has an approved State Plan as described in subpart B of this part;

(3) Have completed a technical assistance program consistent with § 455.62, as determined by the State in accordance with the State Plan, for the building for which financial assistance is to be requested subsequent to the most recent construction, reconfiguration, or utilization change to the building which significantly modified energy use within the building;

(4) Have completed an updated technical assistance program if required in the State Plan as specified in § 455.20(q);

(5) Have implemented all energy conservation maintenance and operating procedures which are identified as the result of a technical assistance program or have provided pursuant to the State plan a satisfactory written justification for not implementing any specific maintenance and operating procedures so identified;

(6) Have met any requirements set forth in the State Plan pursuant to § 455.20(m) regarding the avoidance of supplanting other funds in the financing of energy conservation measures under this part;

(7) Have no plan or intention at the time of application to close or otherwise dispose of the building for which financial assistance is to be requested within the simple payback period or useful life (depending on the State's requirement for determining cost effectiveness) of any energy conservation measure recommended for that building; and

(8) Submit an application in accordance with the provisions of this part and the approved State Plan;

(b) To be eligible for financial assistance:

(1) In States where simple payback has been selected as the cost-effectiveness test pursuant to § 455.20(u)(2), the simple payback period of each energy conservation measure for which financial assistance is requested shall not be less than 2 years nor greater than 10 years, and the estimated useful life of the measure shall be greater than its simple payback period; or

(2) In States where life-cycle costing has been selected as the cost-effectiveness test pursuant to § 455.20(u)(2), the savings-to-investment ratio of each energy conservation measure must be greater than or equal to one under § 455.63(b)(1), over a period for analysis which does not exceed 15 years, and the useful life of the energy conservation measure must be at least 2 years.

(c) Leased equipment is not eligible for financial assistance under this part. Equipment which becomes the property of the grantee at the conclusion of a long-term purchase agreement without any additional payment is eligible.

§ 455.72 Scope of the grant.

Financial assistance awarded under this subpart may be expended for the design (excluding design costs funded under the technical assistance program), acquisition, and installation of energy conservation measures to reduce energy consumption or measures to allow the use of renewable resources in schools and hospitals or to shift energy usage to periods of low demand and cost. Such measures include, but are not necessarily limited to, those included in the definition of "energy conservation measure" in § 455.2.

Subpart G—State Administrative Expenses

§ 455.80 Purpose.

This subpart describes what constitutes a State administrative expense that may receive financial assistance under this part and sets forth the eligibility criteria for States to receive grants for administrative expenses.

§ 455.81 Eligibility.

To be eligible to receive financial assistance for administrative expenses, a State must:

(a) Have in place a State Plan approved by DOE pursuant to § 455.21 and

(b) Be operating a program to provide technical assistance and energy conservation measure grants, or technical assistance, program assistance, and marketing (where energy conservation measures are funded non-Federally) to eligible institutions pursuant to this part.

§ 455.82 Scope of the grant.

A State's administrative expenses shall be limited to those directly related to administration of technical assistance programs, program assistance and marketing programs, and energy conservation measures including costs associated with:

(a) Personnel whose time is expended directly in support of such administration;

(b) Supplies and services expended directly in support of such administration;

(c) Equipment purchased or acquired solely for and utilized directly in support of such administration, subject to 10 CFR 600.436;

(d) Printing, directly in support of such administration; and

(e) Travel, directly related to such administration.

Subpart H—State Grants for Technical Assistance, Program Assistance, and Marketing

§ 455.90 Purpose.

This subpart describes what constitutes a State program for technical

assistance, program assistance, and marketing that may receive financial assistance under this part and sets forth the eligibility criteria for States to receive grants for technical assistance, program assistance, and marketing.

§ 455.91 Eligibility.

To be eligible to receive financial assistance for technical assistance, program assistance, and marketing, a State must:

(a) Have in place a State Plan approved by DOE which includes a description of the State's program or programs to provide technical assistance, program assistance, and marketing, pursuant to § 455.20(j)(1);

(b) Have established a program consistent with this part to fund, from non-Federal sources, energy conservation measures for eligible institutions; and

(c) Provide to DOE a certification pursuant to § 455.122.

§ 455.92 State technical assistance awards.

Technical assistance awards by States under this subpart are subject to all requirements of this part which apply to DOE-awarded technical assistance program grants except that States:

(a) Are not required to award the funds in grant instruments;

(b) May award the funds throughout the fiscal year subject to § 455.144(a)(3); and

(c) Are not required to rank applications under § 455.131(b) of this part.

Subpart I—Cost Sharing

§ 455.100 Limits to Federal share.

Amounts made available under this part, together with any other amounts made available from other Federal sources, may not be used to pay more than 50 percent of the costs of technical assistance programs and energy conservation measures unless the grantee qualifies for the exceptions specified in §§ 455.141(a), 455.142(a), 455.142(b), or for severe hardship assistance specified in § 455.142(c). In cases of severe hardship, the Federal share of the cost cannot exceed 90 percent.

§ 455.101 Borrowing the non-Federal share/title to equipment.

The non-Federal share of the costs of acquiring and installing energy conservation measures may be provided by using financing or other forms of borrowed funds, such as those provided by loans and performance contracts, even if such financing does not provide for the grantee to receive clear title to the equipment being financed until after the grant is closed out. However, grantees in such cases must otherwise meet all the requirements of this part, and financing and loan agreements and performance contracts under this section are subject to the requirements of 10 CFR Part 600 and the certification requirements under § 455.111(e). Grantees must receive clear title to the equipment when the loan is paid off.

§ 455.102 Energy conservation measure cost-share credit.

To the extent a State provides in its State Plan, DOE may wholly or partially credit the costs of the following, with respect to a building, toward the required cost-share for an energy conservation measure grant in that building:

(a) A non-Federally funded technical assistance program;

(b) A non-Federally funded technical assistance program update to comply with § 455.20(q); and

(c) The non-Federally funded implementation of one or more energy conservation measures, which complies with the eligibility criteria set forth in § 455.71.

§ 455.103 Requirements for applications for credit.

(a) If a State has provided for credit in its State Plan pursuant to § 455.20(w), applications for credit will be considered only when the technical assistance programs or updates and the energy conservation measure projects for which credit is sought meet the applicable program requirements, such as those specified in § 455.61, § 455.62, § 455.71, and the relevant sections of 10 CFR part 600, except that the project need not comply with the Davis-Bacon Act regarding labor standards or wage rates.

(b) Credit for energy conservation measures will be considered only when supported by a technical assistance analysis that meets the requirements of § 455.62 and that was performed prior to the installation of the energy conservation measures.

§ 455.104 Rebates from utilities and other entities.

(a) Grantees which receive rebates or other monetary considerations from utilities or other entities for installing the energy conservation measures funded by a grant under this part may use such funds to meet their cost-sharing obligations pursuant to § 455.100.

(b) Where the rebate or monetary consideration does not exceed the non-Federal share of the cost of the measures applied for in a grant application, grantees are not required to deduct the amount of the rebate or monetary consideration from the cost of the measures, and DOE does not consider such rebates or monetary considerations to be program income which would have to be remitted to DOE upon receipt by the grantee.

(c) Where the rebate or monetary consideration does exceed the non-Federal share of the cost of the measures applied for in a grant application, grantees may use the excess to fund additional measures if such measures have been recommended in the technical assistance report. If it is not possible to use the excess funding in this way, the grantee must reduce the cost—and DOE will reduce the Federal share—by the amount of the excess above the non-Federal share.

Subpart J—Applicant Responsibilities—Grants to Institutions and Coordinating Agencies

§ 455.110 Grant application submittals for technical assistance and energy conservation measures.

(a) Each eligible applicant desiring to receive financial assistance (either from DOE directly, through a State serving as a coordinating agency, or through another organization serving as a coordinating agency) shall file an application in accordance with the provisions of this subpart and the approved State Plan of the State in which such building is located. The application, which may be amended in accordance with applicable State procedures at any time prior to the State's final determination thereon, shall be filed with the State energy agency designated in the State Plan. Coordinating agencies shall file a single application with DOE which includes all of the information required below for each building for which assistance has been requested and to which is attached a copy of each application from each building owner.

(b) Applications from schools, hospitals, units of local government, public care institutions, and coordinating agencies for financial assistance for technical assistance programs shall include the certifications contained in § 455.111 and:

(1) The applicant's name and mailing address;

(2) The energy audit or energy use evaluation required by the State pursuant to § 455.20(k) for each building for which financial assistance is requested;

(3) A project budget, by building, which stipulates the intended use of all Federal and non-Federal funds,

including in-kind contributions (valued in accordance with the guidelines in 10 CFR part 600), to be used to meet the cost-sharing requirements described in subpart I of this part;

(4) A brief description, by building, of the proposed technical assistance program, including a schedule, with appropriate milestone dates, for completing the technical assistance program;

(5) Additional information required by the applicable State Plan and any other information which the applicant desires to have considered, such as information to support an application from a school or hospital for financial assistance in excess of the 50 percent Federal share on the basis of severe hardship or an application which proposes the use of Federal funds, paid under and authorized by another Federal agreement to meet cost sharing requirements.

(c) Applications from schools and hospitals and coordinating agencies for financial assistance for energy conservation measures, including renewable resource measures, shall include the certifications contained in § 455.111 and:

(1) The applicant's name and mailing address;

(2) A description of each building for which financial assistance is requested sufficient to determine the building's eligibility, ownership, use, and size in gross square feet;

(3) A project budget, by measure or building, as provided in the State Plan which stipulates the intended use of all Federal and non-Federal funds and identifies the sources and amounts of non-Federal funds, including in-kind contributions (valued in accordance with the guidelines in 10 CFR part 600) to be used to meet the cost-sharing requirements described in subpart I of this part;

(4) A schedule, including appropriate milestone dates, for the completion of the design, acquisition, and installation of the proposed energy conservation measures for each building;

(5) For each energy conservation measure proposed for funding, the projected cost, the projected simple payback period, and if appropriate, the life-cycle cost savings-to-investment ratio calculated under § 455.64. Applications with more than one energy conservation measure per building shall include projected costs and paybacks, and if appropriate, the savings-to-investment ratios for each measure and the average simple payback period or overall savings-to-investment ratio for all measures proposed for the building;

(6) The report of the technical assistance analyst (unless waived by DOE because the report is already in its possession). This report must have been completed since the most recent construction, reconfiguration, or utilization change to the building which significantly modified energy use, for each building;

(7) An update of the technical assistance program report if required by the State in its State Plan and as specified in § 455.20(q);

(8) If the applicant is aware of any adverse environmental impact which may arise from adoption of any energy conservation measure, an analysis of that impact and the applicant's plan to minimize or avoid such impact; and

(9) Additional information required by the applicable State Plan, and any additional information which the applicant desires to have considered, such as information to support an application for financial assistance in excess of the non-Federal share set forth in the State plan on the basis of severe hardship, or an application which proposes the use of Federal funds paid under and authorized by another Federal agreement to meet cost sharing requirements.

§ 455.111 Applicant certifications for technical assistance and energy conservation measure grants to institutions and coordinating agencies.

Applications for financial assistance for technical assistance programs and energy conservation measures, including renewable resource measures, shall include certification that the applicant:

(a) Is eligible under § 455.61 for technical assistance or § 455.71 for energy conservation measures;

(b) Has satisfied the requirements set forth in § 455.110;

(c) For applications for technical assistance, has implemented all energy conservation maintenance and operating procedures recommended in the energy audit pursuant to § 455.20(k), if done, and for applications for energy conservation measures, those recommended in the report obtained under a technical assistance program pursuant to § 455.62. If any such procedure has not been implemented, the application shall contain a satisfactory written justification consistent with the State plan for not implementing that procedure;

(d) Will obtain from the technical assistance analyst, before the analyst performs any work in connection with a technical assistance program or energy conservation measure, a signed statement certifying that the technical assistance analyst has no conflicting financial interest and is otherwise qualified to perform the duties of technical assistance analyst in accordance with the standards and criteria established in the approved State Plan;

(e) When using borrowed funds for the non-Federal share of an energy conservation project where a lien is placed by the lender on equipment funded under the grant, will obtain clauses in the financing contract:

(1) Stating the percent of DOE interest in the equipment (i.e., the percent of the total cost provided by the grant); and

(2) Requiring lender notification, with certified return receipt requested, to the applicable Support Office Director of the filing of a lawsuit seeking a remedy for a default; and

(f) Will comply with all reporting requirements contained in § 455.113.

§ 455.112 Davis-Bacon wage rate requirement.

When an energy conservation measure or group of measures in a building, funded under this part, has a total estimated cost for acquisition and installation of more than $5,000, any construction contract or subcontract in excess of $2,000, using any grant funds awarded under this part must include:

(a) Those contract labor standards provisions set forth in 29 CFR 5.5 and

(b) A provision for payment of laborers and mechanics at the minimum wage rates determined by the Secretary of Labor in accordance with the Davis-Bacon Act (40 U.S.C. 276a) as set forth in 29 CFR part 1.

§ 455.113 Grantee records and reports for technical assistance and energy conservation measure grants to institutions and coordinating agencies.

(a) Each unit of local government or public care institution which receives a grant for a technical assistance program and each school, hospital, and coordinating agency which receives a grant for a technical assistance program or an energy conservation measure, including renewable resource measures, shall keep all the records required by § 455.4 in accordance with this part and the DOE Financial Assistance Rules.

(b) Each grantee shall submit reports as follows:

(1) For technical assistance programs, two copies of a final report of the analysis completed on each building for which financial assistance was provided shall be submitted, either both to the State energy agency, or one to the State energy agency, and one to DOE as agreed upon between the State and the DOE Support Office no later than 90

days following completion of the analysis. These reports shall contain:

(i) The report submitted to the institution by the technical assistance analyst, and

(ii) The institution's plan to implement energy conservation maintenance and operating procedures;

(2) For energy conservation measure projects:

(i) Semi-annual progress reports. Two copies shall be submitted, either both to the State energy agency or one to the State energy agency and one to DOE, as agreed upon between the State and the DOE Support Office, no later than the end of July (for the period January 1 through June 30), and January (for the period July 1 through December 31) and shall detail and discuss milestones accomplished, those not accomplished, status of in-progress activities, and remedial actions if needed to achieve project objectives. Reports of coordinating agency grantees shall include financial assistance which an institution declines or does not use as a result of a change in scope. A final report may be submitted in lieu of the last semi-annual report if it satisfies the semi-annual progress report and final report designated time frames;

(ii) A final report. Two copies shall be submitted, either both to the State energy agency or one to the State energy agency and one to DOE, as agreed upon between the State and the DOE Support Office, within 90 days of the completion of the project and shall list and describe the energy conservation measures acquired and installed, contain a final actual cost and a final estimated simple payback period for each measure and the project as a whole, or a final savings-to-investment ratio for each measure and the project as a whole (depending on the State requirement), and include a statement that the completed energy conservation measures conform to the approved grant application;

(iii) Annual energy use reports from a representative sample to be selected by the State which will reflect the grantee's actual post-retrofit energy use experiences for 3 years after project completion. Two copies of these reports shall be submitted, either both to the State energy agency or one to the State energy agency and one to DOE, as agreed upon between the State and the DOE Support Office within 60 days after the end of each 12-month period covered in the reports and shall identify each building and provide data on energy use for that building for the relevant 12-month period. To the extent feasible, energy consumption data in each annual report should be the monthly usage data by fuel or energy type, and the reports should include brief descriptions of any changes in building usage, equipment, or structure occurring during the reporting period.

(3) Each copy of any technical assistance or energy conservation measure report shall be accompanied by a financial status report completed in accordance with the documents listed in § 455.3;

(4) In cases where both copies of the grantee technical assistance, energy conservation measure, and financial status reports are submitted to the State, as agreed upon between the State and the DOE Support Office, the State shall in turn submit copies to DOE on a mutually agreed-upon schedule; and

(5) Such other information as DOE may from time to time request.

Subpart K—Applicant Responsibilities—Grants to States

§ 455.120 Grant applications for State administrative expenses.

Each State desiring to receive grants to help defray State administrative expenses shall file an application in accordance with the provisions of this section.

(a) Where a State is operating a program solely to provide grants to schools and hospitals, the maximum amount of administrative expenses the State may apply for is $50,000 or 5 percent of the Federal share of its schools and hospitals grant awards, whichever is greater.

(1) At any time after notice by DOE of the amounts allocated to each State for a grant program cycle, each State may apply to DOE for an amount for administrative expenses not exceeding $50,000.

(2) After making a submittal to DOE as required under § 455.133, each State may apply for a further grant not exceeding 5 percent of the total Federal share of all grant awards for technical assistance and energy conservation measures within the State, less the $50,000 provided for in paragraph (a)(1) of this section if that was previously awarded to the State for administrative expenses in the same grant program cycle.

(b) Where a State is eligible and elects to apply to use its appropriated allocation for grants for technical assistance, program assistance, and/or marketing pursuant to § 455.121, the maximum amount of administrative expenses the State may apply for is $50,000 or 5 percent of the total amount obligated or legally committed to eligible recipients in the State pursuant to the State's program under this part, whichever is greater.

(1) At any time after notice by DOE of amounts allocated to each State for a grant program cycle, each State may apply to DOE for an amount for administrative expenses not exceeding $50,000.

(2) Once the total amount obligated or legally committed to the program in the cycle is known, a State may subsequently apply for a further grant, not exceeding 5 percent of the total amount (less the $50,000 provided for in paragraph (b)(1) of this section if that was previously awarded to the State for administrative expenses in the same fiscal year) obligated or legally committed to eligible recipients in the State during the fiscal year for technical assistance, program assistance, and marketing, and for energy conservation measures which are funded with non-Federal funds but which meet the certification and other requirements of this part for such energy conservation measures.

(3) The aggregate amount applied for to cover State administrative expenses, technical assistance, program assistance, and marketing cannot exceed the State's allocation for the fiscal year.

(c) In the event that a State cannot, or decides not to use the amount available to it for an administrative grant under this section for administrative purposes, these funds may, at the discretion of the State, be used for technical assistance and energy conservation measure grants to eligible institutions within that State in accordance with this part.

(d) Applications for financial assistance to defray State administrative expenses shall include:

(1) The name and address of the person designated by the State to be responsible for the State's functions under this part;

(2) An identification of intended use of all Federal and non-Federal funds to be used for the State administrative expenses listed in § 455.82; and

(3) Any other information required by DOE.

§ 455.121 Grant applications for State technical assistance, program assistance, and marketing programs.

(a) A State may apply for up to 100 percent of the amount allocated to it for a grant program cycle to fund administrative expenses under § 455.120 and technical assistance and program assistance programs, or for up to 50 percent of the amount allocated to it for a grant program cycle to fund marketing programs provided that:

(1) The State has established a program to fund technical assistance, program assistance, or marketing programs, and has described its program

or programs in its State Plan, as specified in § 455.20(j);

(2) The State has a program or programs established consistent with this part of that fund, from non-Federal sources, energy conservation measures eligible under this part;

(3) Not more than 15 percent of the aggregate amount of Federal and non-Federal funds legally committed or obligated to eligible recipients in the State to provide program assistance, marketing and technical assistance programs, implement energy conservation measures consistent with this part, and otherwise carry out a program pursuant to this part for the fiscal year concerned are expended for program assistance, technical assistance and marketing costs for such program;

(4) The energy conservation measures funded from non-Federal sources under this section would be eligible for funding under § 455.71; and

(5) The institutions undertaking the non-Federally funded energy conservation measures do so in accordance with all applicable Federal, State, and local laws and regulations with particular attention paid to applicable Federal and State non-discrimination laws and regulations.

(b) Applications for financial assistance to defray State technical assistance, program assistance, or marketing expenses shall include:

(1) The name and address of the person designated by the State to be responsible for the State's functions under this part;

(2) An identification of intended use of all Federal and non-Federal funds for the State administrative expenses listed in § 455.82, or the technical assistance, program assistance, or marketing programs pursuant to this section;

(3) Descriptions of the activities to be implemented together with a description of the State's program to provide non-Federal sources of funding to carry out the State's program(s) for energy conservation measures consistent with this part;

(4) A certification that the 15 percent limit specified in subparagraph (a)(3) of this section will not be exceeded; and

(5) Any other information required by DOE.

§ 455.122 Applicant certifications for State grants for technical assistance, program assistance, and marketing.

Applications from States for financial assistance for technical assistance programs, program assistance, and marketing shall include certifications that the State:

(a) Has established a program or programs to fund, from non-Federal sources, energy conservation measures for eligible buildings consistent with this part;

(b) Will not expend, for technical assistance, program assistance, and marketing, more than 15 percent of the aggregate amount of Federal and non-Federal funds legally obligated or committed to eligible recipients in the State to provide technical assistance, program assistance, marketing programs, implement energy conservation measures consistent with this part, and otherwise carry out a program pursuant to this part for the fiscal year concerned; and

(c) Has provided for regular DOE-funded grants to eligible religiously affiliated institutions if the State has a State constitutional or other legal prohibition on providing State assistance to such institutions and if such institutions would be ineligible to apply for the non-Federally funded energy conservation measures or State-funded technical assistance.

§ 455.123 Grantee records and reports for State grants for administrative expenses, technical assistance, program assistance, and marketing.

(a) Each State which receives a grant for administrative expenses, or a grant for technical assistance programs, program assistance, or marketing shall keep all the records required by § 455.4 in accordance with this part and the DOE Financial Assistance Rules.

(b) Each State shall submit a semi-annual program performance report to DOE by the close of each February and August, including, but not limited to:

(1) A discussion of administrative activities pursuant to § 455.82, if a State has received a grant to fund such activities, and a discussion of milestones accomplished, those not accomplished, status of in-progress activities, problems encountered, and remedial actions, if any, planned pursuant to § 455.135(f);

(2) A discussion of technical assistance, program assistance, and/or marketing programs pursuant to § 455.121, if the State has received grants to fund such activities, including a discussion of the results of the State's program to non-Federally fund energy conservation measures consistent with this part pursuant to § 455.121, with a list of buildings receiving assistance for technical assistance programs and a list of buildings which obtained energy conservation measures using non-Federal funds, including the name and address of each building, the amount and type of funding provided to each, and for energy conservation measures, the types of measures funded in each building together with each measure's total estimated cost and estimated annual cost savings, annual energy savings, and the annual cost of the energy to be saved (determined pursuant to § 455.62(d)) consistent with the data currently provided to DOE on all ICP grants;

(3) A summary of grantee reports received by the State during the report period pursuant to §§ 455.113(b)(1) and (b)(2);

(4) For the report due to be submitted to DOE by the close of each August, an estimate of annual energy use reductions in the State, by energy source, attributable to implementation of energy conservation maintenance and operating procedures and installation of energy conservation measures under this part. Such estimates shall be based upon a sampling of institutions participating in the technical assistance phase of this program and upon the energy use reports submitted to the State pursuant to § 455.113(b)(2)(iii); and

(5) Such other information as DOE may from time to time request.

(c) Each copy of any report covering grants for State administrative, technical assistance, program assistance, or marketing expenses shall be accompanied by a financial status report completed in accordance with the documents listed in § 455.3. In addition, States shall file quarterly financial status reports for the quarters which occur between the semi-annual report periods covered in their program performance reports. These quarterly reports are due within 30 days following the end of the applicable quarters.

Subpart L—State Responsibilities

§ 455.130 State evaluation of grant applications.

(a) If an application received by a State is reviewed and evaluated by that State and determined to be in compliance with subparts E, F, and J of this part, § 455.130(b), any additional requirements of the approved State Plan, State environmental laws, and other applicable laws and regulations, then such application will be eligible for financial assistance.

(b) Concurrent with its evaluation and ranking of grant applications pursuant to § 455.131, the State will forward applications for technical assistance or for energy conservation measures for schools to the State school facilities agency for review and certification that each school application is consistent with related State programs for educational facilities. For hospitals the certification requirement applies only if

there is a State requirement for it in which case the procedure should be described in the State Plan.

§ 455.131 State ranking of grant applications.

(a) Except as provided by § 455.92 of this part, all eligible applications received by the State will be ranked by the State in accordance with its approved State Plan.

(b) For technical assistance programs, buildings shall be ranked in descending priority based upon the energy conservation potential, on a savings percentage basis, of the building as determined in the energy audit or energy use evaluation pursuant to § 455.20(k). Each State shall develop separate rankings for all buildings covered by eligible applications for:

(1) Technical assistance programs for units of local government and public care institutions and

(2) Technical assistance programs for schools and hospitals.

(c) All eligible applications for energy conservation measures received will be ranked by the State on building-by-building or a measure-by-measure basis. If a State ranks on a building-by-building basis, several buildings may be ranked as a single building if the application proposes a single energy conservation measure which is physically connected to all of the buildings. If a State ranks on a measure-by-measure basis, a measure that is physically connected to a number of buildings may be ranked as a single measure. Buildings or measures shall be ranked in accordance with the procedures established by the State Plan on the basis of the information developed during a technical assistance program (or its equivalent) for the building and the criteria for ranking applications. The criterion set forth in paragraph (1) of this subsection shall receive at least 50 percent of the weight given to the criteria used to rank applications. Each State may assign weights to the other criteria as set forth in the State Plan pursuant to § 455.20(e). The criteria for ranking applications are:

(1) Simple payback or a life-cycle cost analysis, calculated in accordance with § 455.63 and § 455.64, as applicable;

(2) The types and quantities of energy to be saved, including oil, natural gas, or electricity, in a priority as established in the approved State Plan;

(3) The types of energy sources to which conversion is proposed, including renewable energy;

(4) The quality of the technical assistance program report; and

(5) Other factors as determined by the State.

(d) A State is exempt from the ranking requirements of this section when:

(1) The total amount requested by all applications for schools and hospitals for technical assistance and energy conservation measures in a given grant program cycle for grants up to 50 percent is less than or equal to the funds available to the State for such grants and the total amount recommended for hardship funding is less than or equal to the amounts available to the State for such grants and

(2) The total amount requested by all applications for buildings owned by units of local government and public care institutions in a given grant program cycle is less than or equal to the total amount allocated to the State for technical assistance program grants in the State;

(e) If a State elects to permit applications for credit pursuant to § 455.102, such applications for completed or partially completed energy conservation measures shall reflect both the work done and the work to be done and will be reviewed and ranked on the basis of the cost of all of the measures in the project. The credit shall not exceed the non-Federal share of the proposed additional energy conservation measures (and the Federal share shall not exceed the cost of the work remaining to be done).

(f) Within the rankings of school and hospital buildings for technical assistance and energy conservation measures including renewable resource measures to the extent that approvable applications are submitted, a State shall initially assure that:

(1) Schools receive at least 30 percent of the total funds allocated for schools and hospitals to the State in any grant program cycle and

(2) Hospitals receive at least 30 percent of the total funds allocated for schools and hospitals to the State in any grant program cycle.

(g) If there are insufficient applications from schools or hospitals to cover the respective 30 percent requirements specified in paragraph (f) of this section, then the State may recommend use of the remaining funds in those allocations for other qualified applicants.

§ 455.132 State evaluation of requests for severe hardship assistance.

(a) To the extent provided in § 455.30(d), financial assistance will be initially available for schools and hospitals experiencing severe hardship based upon an applicant's inability to provide the non-Federal share as specified in the State plan pursuant to § 455.20(g). This financial assistance will be available only to the extent necessary to enable such institutions to participate in the program.

(b) The State shall recommend funds for severe hardship applications wholly or partially from the funds reserved in accordance with § 455.30(d) and as stated in an approved State Plan.

(c) Applications for Federal funding in excess of the non-Federal share in the State plan pursuant to § 455.20(x) based on claims of severe hardship shall be given an additional evaluation by the State to assess on a quantifiable basis to the maximum extent practicable the relative need among eligible institutions. The minimum amount of additional Federal funding necessary for the applicant to participate in the program will be determined by the State in accordance with the procedures established in the State Plan. The primary consideration shall be the institution's inability to provide the non-Federal share of the project cost as specified in the State plan pursuant to § 455.20(x). Secondary criteria such as climate, fuel cost and fuel availability, borrowing capacity, median family income in the area, and other relevant factors as determined by the State may be addressed in the State Plan as specified in § 455.20(g).

(d) A State shall indicate, for those schools and hospitals with the highest rankings, determined pursuant to § 455.131(b) and (c):

(1) The amount of additional hardship funding requested by each eligible applicant for each building determined to be in a class of severe hardship and

(2) The amount of hardship funding recommended by the State based upon relative need, as determined in accordance with the State Plan, to the limit of the hardship funds available. The State must decide on a case-by-case basis whether, and to what extent, it will recommend hardship funding.

(e) If there are insufficient applications from hardship applicants to cover the 10 percent allocation provided for in § 455.30(d), then the State may recommend use of the remaining funds for other qualified applicants. The total amount recommended for hardship grants cannot exceed the 10 percent limit.

§ 455.133 Forwarding of applications from institutions and coordinating agencies for technical assistance and energy conservation measure grants.

(a) Except as provided by § 455.92 of this part, each State shall forward all applications recommended for funding within its allocation to DOE once each program cycle along with a listing of buildings or measures covered by

eligible applications for schools, hospitals, units of local government, and public care institutions ranked by the State if necessary pursuant to the provisions of § 455.131. If ranking has been employed, the list shall include the standings of buildings or measures.

(1) Measure-by-measure rankings will be recombined for the respective buildings with more than one recommended measure and

(2) Buildings will be consolidated under one grantee application.

(b) The State shall indicate the amount of financial assistance requested by the applicant for each eligible building and, for those buildings recommended for funding within the limits of the State's allocation, the amount recommended for funding. If the amount recommended is less than the amount requested by the applicant, the list shall also indicate the reason for that recommendation.

(c) The State shall indicate that it has reviewed and evaluated all of the submitted applications and that those applications meet the relevant requirements of the program, and shall certify that applications submitted are eligible pursuant to § 455.130(a).

§ 455.134 Forwarding of applications for State grants for technical assistance, program assistance, and marketing.

A State eligible to apply for grants for technical assistance, program assistance, or marketing, as described in § 455.121, may submit such an application to DOE any time after the allocations have been announced as part of, or in lieu of, an application for a grant for State administrative expenses. Such applications shall provide separate narrative descriptions, budgets and appropriate milestone dates, covering each activity or program, that are sufficiently detailed to enable DOE to reasonably evaluate the application.

§ 455.135 State liaison, monitoring, and reporting.

Each State shall be responsible for:

(a) Consulting with eligible institutions and coordinating agencies representing such institutions in the development of its State Plan;

(b) Notifying eligible institutions and coordinating agencies of the content of the approved State Plan and any amendment to a State Plan;

(c) Notifying each applicant how the applicant's building or measure ranked among other applications, and whether and to what extent its application will be recommended for funding or if not to be recommended for funding, the specific reasons(s) therefor;

(d) Certifying that each institution has given its assurance that it is willing and able to participate on the basis of any changes in amounts recommended for that institution in the State ranking pursuant to § 455.131;

(e) Reporting requirements pursuant to § 455.113; and

(f) Direct program oversight and monitoring of the activities for which grants are awarded as defined in the State Plan. States shall immediately notify DOE of any noncompliance or indication thereof.

Subpart M—Grant Awards

§ 455.140 Approval of applications from institutions and coordinating agencies for technical assistance and energy conservation measures.

(a) DOE shall review and approve applications submitted by a State in accordance with § 455.133 if DOE determines that the applications meet the objectives of the Act, and comply with the applicable State Plan and the requirements of this part. DOE may disapprove all or any portion of an application to the extent funds are not available to carry out a program or measure (or portion thereof) contained in the application, or for such other reason as DOE may deem appropriate.

(b) DOE shall notify a State and the applicant of the final approval or disapproval of an application at the earliest practicable date after the DOE receipt of the application, and, in the event of disapproval, shall include a statement of the reasons therefor.

(c) An application which has been disapproved for reasons other than lack of funds may be amended to correct the cause of its disapproval and resubmitted in the same manner as the original application at any time within the same grant program cycle. Such an application will be considered to the extent funds have not already been designated for applicants by the ranking process at the time of resubmittal. However, nothing in this provision shall obligate either the State or DOE to take final action regarding a resubmitted application within the grant program cycle. An application not acted upon may be resubmitted in a subsequent grant program cycle.

(d) DOE shall not provide supplemental funds to cover cost overruns or other additional costs beyond those provided for in the original grant award for technical assistance projects and shall fund only one technical assistance project per building.

(e) DOE shall not provide supplemental funds to cover cost overruns or other additional costs beyond those provided for in the original grant award for energy conservation measures funded under a grant in a given grant program cycle. DOE shall not provide funds to cover energy conservation measures intended to replace energy conservation measures funded in an earlier grant cycle unless the State has funds remaining after all applications for new energy conservation measures have been evaluated and submitted to DOE for funding.

(f) If provided for in the State Plan, an applicant may reapply for a technical assistance program or an energy conservation measure grant which was included in a prior grant application but which was not implemented and for which no funds were expended.

(g) An applicant may apply for, and DOE may make, grant awards in another grant program cycle for additional energy conservation measures which relate to a building which previously received grants for other energy conservation measures.

(h) Funds which become available to a grantee after the installation of all approved measures, due to cost underruns in the installed measures, may be used by the grantee for additional measures if such measures are approved in writing by the State and DOE.

(i) DOE may fund costs incurred by an applicant for technical assistance and energy conservation measure projects after the date of the grant application, so long as that date is no earlier than the close of the preceding grant program cycle. Such costs may be funded when, in the judgment of DOE, the applicant has complied with program requirements and the costs incurred are allowable under applicable cost principles and the approved project budget. The applicant bears the responsibility for the entire project cost unless the application is approved by DOE in accordance with this part.

(j) In addition to the prior approval requirements for project changes as specified in the DOE Financial Assistance Rules (10 CFR part 600), a grantee shall request prior written approval from DOE before:

(1) Transferring DOE or matching amounts between buildings included in an approved application when the State ranks applications on a building-by-building basis or

(2) Transferring DOE or matching amounts between energy conservation measures included in an approved application when the State ranks on a measure-by-measure basis.

§ 455.141 Grant awards for units of local government, public care institutions, and coordinating agencies.

(a) DOE may make grants to units of local government, public care institutions, and coordinating agencies representing them for up to 50 percent of the costs of performing technical assistance programs for buildings covered by an application approved in accordance with § 455.140 except that in the case of units of local government and public care institutions a majority of whose operating and capital funds are provided by the Government of the U.S. Virgin Islands, Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands, a grant may be made for up to 100 percent of such costs.

(b) Total grant awards within any State to units of local government and public care institutions are limited to funds allocated to each State in accordance with § 455.30.

(c) Units of local government and public care institutions are not eligible for financial assistance for severe hardship.

§ 455.142 Grant awards for schools, hospitals, and coordinating agencies.

(a) DOE may make grants to schools, hospitals, and coordinating agencies for up to 50 percent of the costs of performing technical assistance programs for buildings covered by an application approved in accordance with § 455.140; except that in the case of schools and hospitals a majority of whose operating and capital funds are provided by the Government of the U.S. Virgin Islands, Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands a grant may be made for up to 100 percent of such costs. Grant awards for technical assistance programs in any State within any grant program cycle shall be limited to a portion of the total allocation as specified in § 455.30(b)(1).

(b) DOE may make grants to schools, hospitals and coordinating agencies for up to 50 percent of the costs of acquiring and installing energy conservation measures, including renewable resource measures, for buildings covered by an application approved in accordance with § 455.140, except that in the case of schools and hospitals a majority of whose operating and capital funds are provided by the Government of the U.S. Virgin Islands, Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands, a grant may be made for up to 100 percent of such costs.

(c) DOE may award up to 10 percent of the total amount allocated to a State for schools and hospitals in cases of severe hardship, ascertained by the State in accordance with the State Plan, for buildings recommended and in amounts determined by the State pursuant to § 455.132(d)(2).

§ 455.143 Grant awards for State administrative expenses.

(a) For the purpose of defraying State expenses in the administration of technical assistance programs in accordance with subpart E and energy conservation measures in accordance with subpart F or energy conservation measures non-Federally funded pursuant to § 455.121, DOE may make grant awards to a State:

(1) Immediately following public notice of the amounts allocated to a State for the grant program cycle, and upon approval of the application for administrative costs, in an amount not exceeding $50,000;

(2) Concurrent with grant awards for approved applications for technical assistance or energy conservation measures for institutions in that State and upon approval of an application for administrative costs, in an amount not exceeding the difference between the amount granted pursuant to paragraph (a)(1) of this section and 5 percent of the Federal share of the total amount of grants awarded within the State for technical assistance programs and energy conservation measures in the applicable grant program cycle; or

(3) Upon receipt by DOE of documentation from the State demonstrating that sufficient non-Federal funding has been obligated or legally committed to schools and hospitals for energy conservation measures pursuant to § 455.121(a) and § 455.123(b)(2), and upon approval of an application for administrative costs, in an amount not exceeding the difference between the amount granted pursuant to paragraph (a)(1) of this section and 5 percent of the aggregate Federal and non-Federal funds obligated or legally committed to eligible recipients in the State to provide technical assistance, program assistance, and marketing programs and implement energy conservation measures consistent with this part, for the fiscal year concerned.

(b) Grants for such purposes may be made for up to 100 percent of the projected administrative expenses, not to exceed the State's allocation or the $50,000 or 5 percent limit, as approved by DOE.

(c) The total of all grants for State administrative costs, technical assistance programs, and energy conservation measures (or for State administrative costs, technical assistance, program assistance, and marketing, if the State elects and is eligible to apply for such grants) in that State shall not exceed the total amount allocated for that State for any grant program cycle.

(d) In the event that a State cannot or decides not to use the amount available to it for an administrative grant under this section for administrative purposes, these funds may, at the discretion of the State, be used for technical assistance and energy conservation grants to eligible institutions within that State in accordance with this part.

§ 455.144 Grant awards for State programs to provide technical assistance, program assistance, and marketing.

(a) For the purpose of defraying State expenses in the administration of special programs to provide technical assistance and program assistance pursuant to § 455.121, DOE may make a grant award to a State for up to 100 percent of the funds allocated to the State for the grant program cycle, provided that the State meets the requirements described in § 455.121(b). In addition:

(1) Funds for individual technical assistance programs provided by the State pursuant to this section shall not exceed 50 percent of the cost of the technical assistance program;

(2) Grants for program assistance may be made for up to 100 percent of a State's projected program assistance expenses; and

(3) Grants for State technical assistance, and program assistance programs may be awarded by DOE upon approval of an application from the State.

(b) For the purpose of defraying State expenses in the administration of a marketing program pursuant to § 455.121, DOE may make a grant award to a State for up to 50 percent of the funds allocated to the State for the grant program cycle, provided that the State meets the requirements described in § 455.121(b). In addition:

(1) Grants for marketing may be made for up to 100 percent of a State's projected marketing expenses; and

(2) Such grants may be awarded by DOE upon approval of an application from the State.

(c) If a State provides a certification under section 455.121(b) and is unable to document that the required non-Federal funding levels for energy conservation measures were achieved substantially for the previous fiscal year for which a similar certification was submitted, DOE may deny the application, accept it after the percentage of allocated funds is reduced

in light of past performance, or take other appropriate action.

(d) In the event that a State, after receiving a grant under this section, cannot or decides not to use all or part of the amount available to it for technical assistance, program assistance, and marketing, these funds may, at the discretion of the State and after appropriate application to and approval of DOE, be used for technical assistance and energy conservation grants to eligible institutions within that State in accordance with this part.

Subpart N—Administrative Review

§ 455.150 Right to administrative review.

(a) A State shall have a right to file a notice requesting administrative review of a decision under § 455.143 by a Support Office Director to disapprove an application for a grant award for State administrative expenses subject to special conditions or a decision under § 455.21 of this part by a Support Office Director to disapprove a State Plan or an amendment to a State Plan.

(b) A State shall have a right to file a notice requesting administrative review of a decision under § 455.144 by a Support Office Director to disapprove an application for a grant award for State technical assistance, program assistance, or marketing programs.

(c) A school, hospital, coordinating agency, or State acting as an institution's duly authorized agent shall have a right to file a notice requesting administrative review of a decision under § 455.140 by a Support Office Director to disapprove an application for a grant award to perform technical assistance programs or to acquire and install an energy conservation measure if the disapproval is based on a determination that:

(1) The applicant is ineligible, under § 455.61 or § 455.71 or for any other reason; or

(2) An energy use evaluation submitted in lieu of an energy audit is unacceptable under the State Plan; or

(3) A technical assistance program equivalent performed without the use of Federal funds does not comply with the requirements of § 455.62 for purposes of satisfying the eligibility requirements of § 455.71(a)(3).

§ 455.151 Notice requesting administrative review.

(a) Any applicant shall have 20 days from the date of receipt of a decision subject to administrative review under § 455.150 to disapprove its application for a grant award to file a notice requesting administrative review. If an applicant does not timely file such a notice, the decision to disapprove shall become final for DOE.

(b) A notice requesting administrative review shall be filed with the Support Office Director and shall be accompanied by a written statement containing supporting arguments.

(c) If the applicant is a State appealing pursuant to paragraph (a) of § 455.150, the State shall have the right to a public hearing. To exercise that right, the State must request such a hearing in the notice filed under paragraph (b) of this section. A public hearing under this section shall be informal and legislative in nature.

(d) A notice or any other document shall be deemed filed under this subpart upon receipt.

§ 455.152 Transmittal of record on review.

On or before 15 days from receipt of a notice requesting administrative review which is timely filed, the Support Office Director shall forward to the Deputy Assistant Secretary the notice requesting administrative review, the decision to disapprove as to which administrative review is sought, a draft recommended final decision for concurrence, and any other relevant material.

§ 455.153 Review by the Deputy Assistant Secretary.

(a) If a State requests a public hearing pursuant to paragraph (a) of § 455.150, the Deputy Assistant Secretary, within 15 days, shall give actual notice to the State and **Federal Register** notice of the date, place, time, and procedures which shall apply to the public hearing. Any public hearing under this section shall be informal and legislative in nature.

(b) The Deputy Assistant Secretary shall concur in, concur in as modified, or issue a substitute for the recommended decision of the Support Office Director:

(1) With respect to a notice filed pursuant to paragraph (a) of § 455.150, on or before 60 days from receipt of documents under § 455.152 or the conclusion of a public hearing, whichever is later; or

(2) With respect to a notice filed pursuant to paragraph (b) of § 455.150, on or before 30 days from receipt of documents under § 455.152.

§ 455.154 Discretionary review by the Assistant Secretary.

On or before 15 days from the date of the determination under § 455.153(b), the applicant for a grant award may file an application, with a supporting statement of reasons, for discretionary review by the Assistant Secretary. If administrative review is sought pursuant to paragraph (a) of § 455.150, the Assistant Secretary shall send a notice granting or denying discretionary review within 15 days and upon granting such review, shall issue a decision no later that 60 days from the date discretionary review is granted. If administrative review is sought pursuant to paragraph (b) of § 455.150, the Assistant Secretary shall send a notice granting or denying discretionary review within 15 days and upon granting such review shall issue a decision no later than 30 days from the date discretionary review is granted. The Assistant Secretary may not issue a notice or decision under this paragraph without the concurrence of the DOE Office of General Counsel.

§ 455.155 Finality of decision.

A decision under § 455.153 shall be final for DOE if there is no review sought under § 455.154. If there is review under § 455.154, the decision thereunder shall be final for DOE, and no appeal shall lie elsewhere in DOE.

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federal register

Friday
February 19, 1993

Part VI

Department of Education

34 CFR Part 361
The State Vocational Rehabilitation Services Program; Proposed Rule

DEPARTMENT OF EDUCATION

34 CFR Part 361

The State Vocational Rehabilitation Services Program

AGENCY: Department of Education.
ACTION: Notice of intent to regulate.

SUMMARY: The Secretary provides notice that the Department intends to amend the regulations implementing The State Vocational Rehabilitation Services Program authorized under title I of the Rehabilitation Act of 1973, as amended (the Act), to establish evaluation standards and performance indicators, required under the Rehabilitation Act Amendments of 1992. The standards and indicators would be used to measure the performance of each State's program and to provide information for the development of a program improvement plan for each State that does not meet the standards. The Secretary is publishing this notice of intent to regulate to solicit public comment on what the content of the standards and indicators should be prior to the development of specific proposed standards and indicators.

DATES: Comments, suggestions, or recommendations in response to this notice must be received on or before April 20, 1993.

ADDRESSES: All comments concerning this notice should be addressed to Commissioner, Rehabilitation Services Administration, U.S. Department of Education, 400 Maryland Avenue, SW., room 3028, Mary E. Switzer Building, Washington, DC 20202–2899.

FOR FURTHER INFORMATION CONTACT: Hubert Davis, U.S. Department of Education, 400 Maryland Avenue, SW., room 3018, Mary E. Switzer Building, Washington, DC 20202–2899. Telephone: (202) 205–8299. Individuals who are hearing impaired may call (202) 205–5896 for TDD services.

SUPPLEMENTARY INFORMATION:

Background

The Rehabilitation Act Amendments of 1992 (Pub. L. 102–569, enacted October 29, 1992) added a new section 106, which requires the Secretary, through the Commissioner of the Rehabilitation Services Administration (RSA), to establish evaluation standards and performance indicators for the title I vocational rehabilitation services program by September 30, 1994. The standards and indicators must be developed with input from State vocational rehabilitation agencies, related professional and consumer organizations, service recipients, and other interested parties. Each State is required to report annually the extent to which it is in compliance with the evaluation standards and to develop a program improvement plan if its performance falls below established standards. The Secretary is required to withhold funds if a State agency that does not comply substantially with the evaluation standards fails to enter into a program improvement plan or to comply substantially with a program improvement plan.

The concept of using standards to evaluate the performance of rehabilitation programs is not new to the Act. Section 401(b) of the Rehabilitation Act of 1973 required the Secretary to develop and publish general standards for evaluating whether programs were achieving the objectives of the Act and to consider whether programs had met the standards in making decisions regarding continued or increased funding. The 1978 amendments to the Act struck the language in section 401(b) and added a new section 14 that required the Secretary to evaluate the impact and effectiveness of all programs under the Act, but did not require the Secretary to establish standards for evaluation or to consider the results of program evaluations in making funding decisions under the Act. The concept of standards subsequently was added to section 14 in the 1984 amendments to the Act, but no provision was made for using the standards or evaluations in making funding decisions. Since 1984, the provisions in section 14(a) relating to evaluation standards have remained substantially the same.

Standards were developed in the 1970s and 1980s in response to these evolving legislative requirements. RSA collaborated with the Council of State Administrators of Vocational Rehabilitation (CSAVR) to develop and field test the first set of standards. RSA later awarded an evaluation contract to the Berkeley Planning Associates (BPA) to develop a revised set of standards. The BPA standards assessed program procedures as well as outcomes. CSAVR reviewed and modified the standards developed by BPA and in 1984 recommended that State agencies adopt the modified standards. Although additional efforts have been made since 1984 to revise the BPA standards and to develop new standards, no other standards have been used to date.

Compliance with the BPA evaluation standards was voluntary. The standards were never used as a basis for sanctions or funding decisions because there was no such authority in the statute.

Statutory Provisions and Legislative History of Section 106

Section 106 provides that the evaluation standards and performance indicators must include outcome and related measures of program performance that facilitate, and in no way impede, the purpose and policy of title I. The purpose of title I, as stated in section 100 of the Act, as amended, is to assist States in operating a comprehensive, coordinated, effective, efficient, and accountable program of vocational rehabilitation that is designed to assess, plan, develop, and provide vocational rehabilitation services for individuals with disabilities, consistent with their strengths, resources, priorities, concerns, abilities, and capabilities, so that those individuals may prepare for and engage in gainful employment. The policy of title I, as stated in the amended section 100, is that each State's vocational rehabilitation program be carried out in a manner that is consistent with the following principles:

(A) Individuals with disabilities, including individuals with the most severe disabilities, are generally presumed to be capable of engaging in gainful employment, and the provision of individualized vocational rehabilitation services can improve their ability to become gainfully employed.

(B) Individuals with disabilities must be provided opportunities to pursue meaningful careers by securing gainful employment commensurate with their abilities and capabilities and in integrated settings.

(C) Individuals with disabilities must be active participants in their own rehabilitation programs, including making meaningful and informed choices about the selection of their vocational goals and objectives and the vocational services they receive.

(D) Families and natural supports can play an important role in the success of a vocational rehabilitation program if an individual with a disability requests or needs these supports.

(E) Qualified vocational rehabilitation counselors and other qualified rehabilitation personnel facilitate the accomplishment of an individual's employment goals and objectives.

(F) Individuals with disabilities and their advocates are full partners in the vocational rehabilitation program and must be involved on a regular basis and in a meaningful manner with respect to policy development and implementation.

(G) Accountability measures must facilitate and not impede the accomplishment of the goals and

objectives of the program, including providing vocational rehabilitation services to, among others, individuals with the most severe disabilities.

The only additional guidance provided in the legislative history for section 106 is the suggestion in the Committee Report of the Senate Committee on Labor and Human Resources that the standards and indicators should include factors relating to consumer satisfaction and should emphasize gainful employment outcomes.

Examples of Possible Standards and Indicators

On the basis of the statutory language and legislative history of section 106 and the stated purposes and policies of title I, the Secretary is giving preliminary consideration to proposing standards and indicators that would assess each State's vocational rehabilitation services program. The Secretary intends to develop standards and indicators that focus on assessing the quality of outcomes, rather than procedural requirements, because the legislation emphasizes performance outcomes and because the Secretary does not intend to duplicate procedural requirements for which there are existing compliance monitoring mechanisms. The Secretary is interested in receiving comment on this decision.

Examples of some possible evaluation standards are listed below, along with examples of possible performance indicators for each standard. The examples of standards and indicators provided in this notice are derived in part from the previous standards developed by RSA, CSAVR, and BPA, to the extent those standards continue to be relevant in light of amendments to title I. These examples are meant to stimulate public comment regarding what the proposed standards and indicators should be. They are not the Secretary's proposed standards and indicators.

(1) Coverage and Accessibility

Compliance with a coverage and accessibility standard, for example, might be measured by the following types of indicators:

- The number of individuals accepted for services, including those with severe disabilities, in relation to the number who apply for services.
- The number of individuals served, including those with severe disabilities, in relation to the number accepted for services.
- The number of individuals served, including those with severe disabilities, in relation to the State's population.
- The extent to which individuals who are served are provided all of the services identified in their IWRP.
- The extent to which individuals exiting special education, including those with severe disabilities, are accepted for services.

(2) Effective Use of Resources

Compliance with an effective use of resources standard might be measured by the following types of indicators:

- The extent to which successful employment outcomes are attained in relation to the resources of the State vocational rehabilitation agency.
- The extent to which eligibility determinations are made and services delivered in a timely manner.
- The average rehabilitation rate of counselors.

(3) Attainment of High Quality Employment and Employment-Related Outcomes for Clients

Compliance with an attainment of high quality employment and employment-related outcomes standard might be measured by the following types of indicators:

- The ratio of rehabilitations, including those attained by individuals with severe disabilities, to other types of case closures.
- The ratio of competitive employment outcomes to the total number of rehabilitations that are attained by clients, including individuals with severe disabilities.
- The extent to which placements provide increases in hours worked and wages earned from pre-service hours and wages.
- The extent to which placements are in career ladder positions with the potential for promotion.
- The extent to which placements provide integrated working environments.
- The extent to which placements reduce the number of rehabilitated individuals who receive public assistance and other transfer payments.
- The extent to which placements provide rehabilitated individuals with employment-related fringe benefits, such as health insurance and retirement benefits.

(4) Retention of Program Benefits by Clients

Compliance with a retention of program benefits standard might be measured by the following type of indicator:

- The extent to which the employment and related outcomes of rehabilitated individuals, such as those suggested under possible standard (3), are maintained or improved over time.
- The proportion of rehabilitated individuals who return for services.

(5) Consumer Satisfaction

Compliance with a consumer satisfactionst standard might be measured by the following types of indicators:

- The extent to which clients are satisfied with their treatment by the vocational rehabilitation agency and counselors.
- The extent to which clients are satisfied with their participation in the selection of their vocational goals and objectives.
- The extent to which clients are satisfied with the services they have received.
- The extent to which clients are satisfied with the providers of needed services.
- The extent to which clients are satisfied with the employment they have obtained.

The Secretary anticipates that some of the data that is currently collected to measure compliance with program procedural requirements will also be useful in measuring performance under the standards and indicators. However, the Secretary believes that certain standards and indicators may be adopted that would require the collection of additional data. For example, the Secretary is not aware of existing data sources that could be used to measure performance under possible consumer satisfaction and retention of benefits standards. The Secretary requests that commenters identify existing data sources that may provide useful information for measuring performance under possible standards and indicators that are proposed by the commenter or provided as examples in this notice.

If additional data is required to measure performance under the standards and indicators that are adopted, the Secretary intends to begin measuring performance under those standards and indicators that can be measured based on existing data sources prior to measuring performance under the standards and indicators that require the collection of additional data.

INVITATION TO COMMENT:

The Secretary is interested in receiving public comment on (1) whether the examples of standards contained in this notice are an appropriate basis for measuring program performance and, if not, what alternative standards should be used; (2) whether the types of indicators provided as examples in this notice would be measurable, and what other indicators would better implement specific standards (both those contained in this notice and those proposed in

comments); and (3) what weights should be given to specific standards (both those contained in this notice and those proposed in comments). The Secretary encourages commenters to propose standards and indicators that are measurable and are not unduly burdensome and to consider both qualitative and quantitative factors of vocational rehabilitation program performance. In addition, because program performance may be affected by factors such as the types of clients a State vocational rehabilitation agency serves and the economic environment within a State, the Secretary is interested in receiving comment on whether client and economic variables should be taken into account so that the measures of reported performance are standardized from State to State. Finally, the Secretary is interested in receiving comment on how acceptable levels of performance under each standard should be determined.

All comments submitted in response to this notice will be available for public inspection, during and after the comment period, in room 3018, 330 C Street, SW., Washington DC, between the hours of 8:30 a.m. and 4 p.m., Monday through Friday of each week except Federal holidays.

(Authority: 29 U.S.C. 726)

Dated: February 12, 1993.

Richard W. Riley,

Secretary of Education.

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federal register

Friday
February 19, 1993

Part VII

Department of Education

34 CFR Part 305
Regional Resources and Federal Centers; Final Rule

DEPARTMENT OF EDUCATION

34 CFR Part 305

RIN 1820–AB00

Regional Resource and Federal Centers

AGENCY: Department of Education.

ACTION: Final regulations.

SUMMARY: The Secretary amends the regulations implementing the Regional Resource and Federal Centers program authorized by section 621 of the Individuals with Disabilities Education Act (IDEA). These final regulatory changes are needed to implement the guidelines and criteria developed by the Secretary based on recommendations from a panel convened in accordance with section 621(f)(1) of the IDEA. These regulations add requirements for the Regional Resource and Federal Centers related to the identification of and the provision of technical assistance on emerging issues and trends; clarify responsibilities related to linking and coordinating with other technical assistance providers as well as certain other entities; and assure that Regional Resource Center (RRC) evaluation measures include State capacity for improving services for students with disabilities.

EFFECTIVE DATE: These regulations take effect either 45 days after publication in the Federal Register or later if the Congress takes certain adjournment. If you want to know the effective date of these regulations, call or write the Department of Education contact person. A document announcing the effective date will be published in the Federal Register.

FOR FURTHER INFORMATION CONTACT: Ms. Marie Roane, U.S. Department of Education, 400 Maryland Avenue, SW., room 3072, Switzer Building, Washington, DC 20202–2651. Telephone: (202) 205–8451. Deaf and hearing impaired individuals may call (202) 205–6170 for TDD services.

SUPPLEMENTARY INFORMATION: The Regional Resource and Federal Centers program provides assistance for projects designed to assist State educational agencies, and through those State educational agencies, local educational agencies and other appropriate agencies providing special education, related services, and early intervention services to infants, toddlers, children, and youth with disabilities and their families. Public Law 101–476, amending the IDEA, required that the Secretary convene a panel to develop, and publish in the Federal Register for review and comment, guidelines and criteria for the operation of the program.

This program supports the National Education Goals by improving services for infants, toddlers, children, and youth with disabilities and, by so doing, helping them reach the high levels of academic achievement called for by the National Education Goals.

On September 21, 1992, the Secretary published a notice of proposed rulemaking (NPRM) in the Federal Register (57 FR 43572). The NPRM included a discussion of the major issues.

Public Comment

In the NPRM the Secretary invited comments on the proposed regulations. Except for minor editorial revisions, there are no differences between the NPRM and these final regulations. The Secretary did not receive any substantive comments.

Executive Order 12291

These regulations have been reviewed in accordance with Executive Order 12291. They are not classified as major because they do not meet the criteria for major regulations established in the order.

Intergovernmental Review

This program is subject to the requirements of Executive Order 12372 and the regulations in 34 CFR part 79. The objective of the Executive order is to foster an intergovernmental partnership and a strengthened federalism by relying on processes developed by State and local governments for coordination and review of proposed Federal financial assistance.

In accordance with the order, this document is intended to provide early notification of the Department's specific plans and actions for this program.

Assessment of Educational Impact

In the notice of proposed rulemaking, the Secretary requested comments on whether the proposed regulations would require transmission of information that is being gathered by or is available from any other agency or authority of the United States.

Based on the response to the proposed rules and on its own review, the Department has determined that the regulations in this document do not require transmission of any information that is being gathered by or is available from any other agency or authority of the United States.

List of Subjects in 34 CFR Part 305

Grant programs—education, State, State educational agencies, Infants, toddlers, children, and youth with disabilities, Early intervention, Special education and related services, Local educational agencies.

(Catalog of Federal Domestic Assistance Number 84.028, Regional Resource and Federal Centers)

Dated: February 4, 1993.

Richard W. Riley,

Secretary of Education.

The Secretary amends part 305 of title 34 of the Code of Federal Regulations as follows:

PART 305—REGIONAL RESOURCE AND FEDERAL CENTERS

1. The authority citation for part 305 continues to read as follows:

Authority: 20 U.S.C. 1421, unless otherwise noted.

2. Section 305.10 is amended by revising the heading, and adding after the words "identifying and solving persistent problems" in paragraph (b) a comma and the words "and in identifying emerging issues and trends", to read as follows:

§ 305.10 What kinds of services are provided by Regional Resource Centers under this part?

* * * * *

3. Section 305.11 is redesignated as § 305.12, and a new § 305.11 is added to read as follows:

§ 305.11 What kinds of services are provided by the Federal Center under this part?

The Federal Center shall—

(a) Provide a national perspective for establishing technical assistance activities within and across regions by identifying and synthesizing emerging issues and trends and establishing a panel to interpret this information. This panel must be broadly representative of the special education constituency, including representatives of State and local educational agencies, parent organizations, consumer and advocacy organizations, professional organizations, and consumers, with particular attention being given to individuals from minority backgrounds. This information must be shared with Regional Resource Centers and State educational agencies and may serve as a basis for multi-State and multi-regional technical assistance activities;

(b) Assist in linking and coordinating the Regional Resource Centers with each other and with other technical assistance providers, including health-

related entities as well as organizations representing persons with disabilities, professional organizations, and parent projects. Information from these activities must be shared with the Regional Resource Centers as well as the States;

(c) Provide information to, and training for, agencies, institutions, and organizations regarding techniques and approaches for submitting applications for grants, contracts, and cooperative agreements under Parts C through G of the Act, and make that information available to the Regional Resource Centers on request;

(d) Give priority to providing technical assistance concerning the education of children with disabilities from minority backgrounds and exchanging information with and, if appropriate, cooperating with other centers addressing the needs of these children; and

(e) Provide assistance to State educational agencies, through Regional Resource Centers, for the training of hearing officers.

(Authority: 20 U.S.C. 1421)

§ 305.30 [Amended]

4. Section 305.30 is amended by adding the words "and § 305.11" after "in § 305.10".

5. Section 305.31 is amended by revising the heading, paragraphs (a)(1) and (2), and paragraph (f)(2) and adding a parenthetical phrase at the end of the section immediately preceding the authority citation to read as follows:

§ 305.31 What are the selection criteria for evaluating applications under this program?

* * * * *

(a) * * *

(1) The Secretary reviews each application for a Regional Resource Center for information that shows the needs of the States in the region and support for the applicant's project by the agencies to be served by the project.

(2) The Secretary reviews each application for a Federal Center for information that identifies potential issues and trends of national concern and procedures for obtaining broad based input in validating, interpreting, synthesizing, and updating information on emerging issues and trends on a regular basis.

(f) * * *

(2) The Secretary looks for information that shows methods of evaluation that are appropriate for the project, and, to the extent possible, are objective and produce data that are quantifiable. For Regional Resource Centers, evaluation methods must include evaluation of changes in State capacity to work with local educational agencies to improve services for students with disabilities.

* * * * *

(Approved by the Office of Management and Budget under control number 1820–0028)

(Authority: 20 U.S.C. 1421)

6. In § 305.40 the heading and undesignated introductory text are revised and a parenthetical phrase is added at the end of the section immediately preceding the authority citation to read as follows:

§ 305.40 What additional activities must each Center perform?

Each Regional Resource or Federal Center shall—

* * * * *

(Approved by the Office of Management and Budget under control number 1820–0028)

(Authority: 20 U.S.C. 1409(g); 20 U.S.C. 1421)

[FR Doc. 93–3839 Filed 2–18–93; 8:45 am]

BILLING CODE 4000-01-M

federal register

Friday
February 19, 1993

Part VIII

Department of the Interior

Bureau of Indian Affairs

Indian Gaming; Notice

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Indian Gaming

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice of approved Tribal-State Compact.

SUMMARY: Pursuant to 25 U.S.C. 2710, of the Indian Gaming Regulatory Act of 1988 (Pub. L. 100–497), the Secretary of the Interior shall publish, in the **Federal Register**, notice of approved Tribal-State Compacts for the purpose of engaging in Class III (casino) gambling on Indian reservations. The Assistant Secretary—Indian Affairs, Department of the Interior, through his delegated authority, has approved the Tribal-State Compact for Class III Gaming Between the Swinomish Indian Tribal Community and the State of Washington, enacted on December 21, 1992.

DATES: This action is effective February 19, 1993.

FOR FURTHER INFORMATION CONTACT: Hilda Manuel, Interim Staff Director, Indian Gaming Management Staff, Bureau of Indian Affairs, Washington, DC 20240, (202) 219–0994.

Dated: February 11, 1993.

Stan Speaks,

Acting Assistant Secretary, Indian Affairs.

[FR Doc. 93–3868 Filed 2–18–93; 8:45 am]

BILLING CODE 4310–02–M

federal register

Friday
February 19, 1993

Part IX

Environmental Protection Agency

40 CFR Part 86
Control of Air Pollution From New Motor Vehicles; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 86

[AMS–FRL–4595–7]

RIN 2060–AC55

Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines; Regulations Requiring On-Board Diagnostic Systems on 1994 and Later Model Year Light-Duty Vehicles and Light-Duty Trucks

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This final rule establishes requirements for on-board diagnostic (OBD) systems on light-duty vehicles and light-duty trucks beginning with the 1994 model year. Section 202(m) of the Clean Air Act (CAA) requires EPA to promulgate rules mandating OBD systems on such vehicles. This rulemaking requires manufacturers to install OBD systems which; monitor emission control components for any malfunction or deterioration causing exceedances of emission standards, and alert the vehicle operator to the need for repair. This rulemaking also requires that, when a malfunction occurs, diagnostic information must be stored in the vehicle's computer to assist the mechanic in diagnosis and repair. This rulemaking does not contain the final requirements under which information necessary to perform repair and maintenance service on on-board diagnostic systems and other emission-related vehicle components would be made available to the service and repair industry. Such requirements will be contained in a forthcoming Agency rulemaking.

DATES: This final rule is effective May 20, 1993. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 20, 1993.

The information collection requirements contained in § 86.094–21 have not been approved by the Office of Management and Budget (OMB) and are not effective until OMB has approved them. A technical amendment will be published in the **Federal Register** when OMB has approved the information collection requirements.

ADDRESSES: Materials relevant to this rulemaking are contained in Docket No. A–90–35. The docket is located at The Air Docket, 401 M Street, SW., Washington, DC 20460, and may be viewed in room M–1500—8:30 a.m. until noon and from 1:30 p.m. until 3:30 p.m. Monday through Friday. A reasonable fee may be charged by EPA for copying docket material.

FOR FURTHER INFORMATION CONTACT: Todd Sherwood, Certification Division, U.S. Environmental Protection Agency, 2565 Plymouth Road, Ann Arbor, Michigan 48105, Telephone (313) 668–4405.

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I. Introduction and Summary of Rule

Section 202(m) of the CAA, as amended by the Clean Air Act Amendments of 1990 (CAAA), directs EPA to promulgate regulations requiring 1994 and later model year light-duty vehicles (LDVs) and light-duty trucks (LDTs) to contain an OBD system which will monitor emission-related components for malfunctions or deterioration "which could cause or result in failure of the vehicles to comply with emission standards established" for such vehicles.[1] On September 24, 1991, EPA published a notice of proposed rulemaking[2] outlining the Agency's proposed OBD requirements. Today's document promulgates these regulations.

Under these regulations, a vehicle's OBD system must be capable of detecting a malfunction or deterioration of emission-related components or design elements before such a malfunction or deterioration individually causes an emission increase greater than certain thresholds set by EPA as outlined below. EPA will evaluate whether the OBD system is properly monitoring and identifying such malfunctions or deterioration using the Federal Test Procedure (FTP). When such a malfunction or deterioration is detected, a malfunction indicator light (MIL) must illuminate on the dashboard and codes identifying the malfunction must be stored in the computer for access by a repair technician.

For LDVs and LDTs with Otto cycle engines, the rule requires that the OBD system monitor the performance and detect malfunctions and deterioration of the catalyst and oxygen sensor and detect engine misfire. When the OBD system makes such a detection, a trouble code must be stored in the vehicle computer identifying the likely problem, and the MIL must be illuminated. The thresholds for OBD system identification of these emission-related malfunctions or deterioration are as follows:

(1) Catalyst deterioration before it results in both exhaust emissions greater than 0.6 g/mi HC and an exhaust emission increase of greater than 0.4 g/mi HC;

(2) Engine misfire before it results in an exhaust emission increase of greater than 0.4 g/mi HC, 3.4 g/mi CO, or 1.0 g/mi NOx; and,

(3) Oxygen sensor deterioration before it results in an exhaust emission increase of greater than 0.2 g/mi HC, 1.7 g/mi CO, or 0.5 g/mi NOx.

In addition to detecting misfire as described above, the system must store a code indicating which cylinder is misfiring or that multiple cylinders are misfiring. In addition to detecting oxygen sensor deterioration as described above, the system must detect any malfunction or deterioration of the sensor that renders it incapable of

[1] These regulations apply to all 1994 and later model year LDVs and LDTs for which emission standards are currently in place or are subsequently adopted. In addition to standards already in place, EPA is developing standards which would be applicable to vehicles when operating on natural gas and liquified petroleum gas (57 FR 52912, November 5, 1992).

[2] 56 FR 48272 (September 24, 1991).

satisfactorily performing its functions as part of the OBD system.

Additionally, manufacturers are required to detect the occurrence of a malfunction or deterioration of any other emission-related powertrain system or component that results in an FTP exhaust emission increase of 0.2 g/mi HC, 1.7 g/mi CO, or 0.5 g/mi NOx. Rather than explicitly specifying what other components must be monitored, EPA is providing the manufacturer with the flexibility to determine the need to monitor. Finally, for all vehicles certified to the revised evaporative emissions test procedure,[3] the vehicle's OBD system must detect the occurrence of any leakage or other malfunction of the vapor recovery or purge systems that results in an evaporative emissions increase of 30.0 g/test where these emissions result from vapor leaks greater than or equal to a 0.04 inch (1 mm) diameter hole or equivalent sized leak. Manufacturers are required to detect these additional malfunctions only if they occur in actual use and result in the aforementioned emission levels or increases. In other words, if operational failure of components or systems other than the catalyst, the oxygen sensor, or anything causing engine misfire is avoidable or will not cause an emission increase greater than the thresholds discussed in this paragraph, such components or systems need not be monitored, nor their failures detected. However, to ensure compliance with these regulations, the Agency's in-use enforcement program will be structured to evaluate whether threshold-exceeding emission increases do, in fact, occur in-use.

For LDVs and LDTs with diesel cycle engines, this rulemaking does not require monitoring of the oxygen sensor and detection of engine misfire. However, catalyst malfunction or deterioration must be detected before emissions are greater than 0.6 g/mi HC and have increased 0.4 g/mi HC, and any other malfunction or deterioration of an emission-related powertrain component must be detected prior to an emission increase of 0.2 g/mi HC, 1.7 g/mi CO, or 0.5 g/mi NO_x. Manufacturers are required to detect these malfunctions (including malfunction of the catalyst) only if they occur in actual use and result in the aforementioned emission levels or increases. Therefore, if manufacturers are confident that any malfunction or deterioration will not result in threshold-exceeding emission increases, they may choose to forego OBD monitoring of emission control system performance. To ensure compliance with these regulations, the Agency's in-use enforcement program will be structured to evaluate whether threshold-exceeding emission increases do, in fact, occur in-use.

For the purpose of this rulemaking, the emission increases discussed above are measured from a baseline emission level equivalent to the emission level of the vehicle under normal and properly maintained operating conditions. In other words, the emission thresholds represent emission increases above the emission level of the vehicle prior to the malfunction occurring. If, by replacing a questionable component with a known good component the emissions decrease by the threshold level for that component, the OBD system should have detected a problem and flagged the questionable component as malfunctioning.

This rulemaking also requires that, for all LDVs and LDTs (including those with diesel cycle engines), the OBD system monitor and detect electrical failure or disconnection of the evaporative purge control or any emission-related powertrain component which, either directly or indirectly, sends information to, or receives information from, the vehicle's on-board computer. If electrical disconnection occurs that prevents or limits the operation of the component, regardless of the emission effect, the MIL must be illuminated and a trouble code stored. For obvious reasons, electrical functioning of the evaporative purge control need not be monitored on vehicles not equipped with an evaporative emission control system.

This rulemaking also contains anti-tampering provisions to protect the on-board computer from any form of tampering, and to make inspection of the OBD system an effective in-use enforcement measure during Inspection and Maintenance program testing.

The proposed requirements governing the accessibility of stored codes to persons servicing OBD equipped vehicles are also being finalized in this rulemaking. However, the proposed requirements under which manufacturers must make available, in a timely fashion and at a reasonable cost, all emission-related diagnostic and repair information necessary to properly use the OBD system and make emission-related repairs are not being made final in this rulemaking. A forthcoming Agency final rulemaking shall address these proposed requirements.

In accordance with the CAAA, all requirements will be implemented beginning with the 1994 model year, with the exception of vapor leak detection within the evaporative emission control system as noted below. Manufacturers can request waivers for OBD requirements for up to two years. EPA will consider each waiver request on a case-by-case basis.

These regulations adopt a two step phase-in of evaporative control system OBD requirements. Beginning with the 1994 model year, all vehicles not having been granted a waiver from OBD requirements by EPA will be expected to detect electrical failure within the evaporative purge control. In addition, EPA will implement the OBD criteria for vapor leak detection and non-electrical purge problems within the evaporative emissions control system for vehicles certified to the Agency's revised evaporative emission test procedure, which will be phased-in between model years 1996 and 1999.

Today's rulemaking makes an allowance for manufacturers to satisfy the Federal OBD requirements through the 1998 model year by installing systems satisfying the California OBD II requirements pertaining to those model years. This allowance means that manufacturers could concentrate on designing one system to meet the California OBD requirements and installing that system nationwide during allowable model years. The Agency will accept OBD systems which demonstrate compliance with California OBD II regulations as satisfying Federal OBD requirements for this period.

Despite EPA acceptance of OBD systems that meet the OBD II requirements, all existing Federal requirements and those being made final today will continue to apply, with the exception of the following: § 86.094–17, specifying the technical requirements of OBD; § 86.094–18, specifying the tampering prevention requirements; § 86.094–25(d), specifying the durability data vehicle requirements; and §§ 86.094–30(f) and 86.095–30(f), specifying the OBD certification requirements. For example, the Agency will conduct its own certification, selective enforcement audit, and in-use enforcement programs. However, for a 1994 through 1998 model year vehicle certified to OBD II regulations, compliance will be determined against the OBD II emission thresholds and other technical requirements. EPA will conduct its own enforcement programs separately from California, but the enforcement protocols used by the Agency for vehicles certified to the OBD II

[3] Control of Air Pollution from New Motor Vehicles and New Motor Vehicle Engines: Evaporative Emission Regulations for Gasoline- and Methanol-Fueled Light-Duty Vehicles, Light-Duty Trucks and Heavy-Duty Vehicles, signed by the Administrator on January 20, 1993, and soon to appear in the Federal Register.

requirements will be those specified in the OBD II rule.

Today's final rulemaking is expected to result in substantial emission reductions at reasonable costs. The cost effectiveness, or total dollars per ton of pollutant reduced, has been estimated at $1,974 per ton of HC reduced, $124 per ton of CO reduced, and $1,974 per ton of NO_X reduced. The increased cost to the manufacturer is estimated at roughly $78 per vehicle. This reduces to an estimated net cost increase to the consumer of $36 per vehicle after accounting for fuel economy savings and other savings associated with replacement of current I/M tailpipe testing with OBD system checks.

Today's rulemaking applies to all 1994 and later model year light-duty vehicles and light-duty trucks manufactured on, or after, the effective date of these regulations, as indicated above.[4]

II. Background and Development

On November 15, 1990, the Clean Air Act Amendments of 1990 were signed into law. Section 207(a) of these amendments added paragraph (m) to section 202 of the Clean Air Act (CAA, or Act), which directs the EPA to promulgate regulations requiring manufacturers to install on all new 1994 and later model year LDVs and LDTs diagnostic systems capable of:

(a) Accurately identifying, for the vehicle's useful life, emission-related system deterioration or malfunction, including, at a minimum, the catalytic converter and oxygen (O_2) sensor, which could cause or result in failure of the vehicles to comply with emission standards;

(b) Alerting the vehicle's owner or operator to the likely need for emission-related component or system maintenance or repair;

(c) Storing and retrieving fault codes specified by the Administrator; and

(d) Providing access to stored information in a manner specified by the Administrator.

In addition, section 202(m)(5) of the amended Act requires manufacturers to make available to interested persons all necessary emission-related maintenance and repair information, including information needed to make use of the OBD system. Such information is to be provided according to regulations adopted by EPA.

As of August 1990, 96 urban areas were in violation of the National Ambient Air Quality Standard (NAAQS) for ozone and 41 areas could not attain the NAAQS for carbon monoxide (CO). EPA estimates that currently 60% of the total tailpipe HC emissions from LDVs are caused by the 20% of vehicles with serious emission control system malfunctions or degradation.[5] The more stringent new vehicle emission standards mandated by the Act are likely to increase further the proportion of total LDV emissions from malfunctioning vehicles.

Most OBD systems on current in-use vehicles target only those malfunctions causing driveability problems. However, many types of malfunctions may not cause driveability problems but may nonetheless lead to significant increases in emissions. Since emission-related malfunctions do not generally cause any outward indication of a problem (e.g., poor driveability or decreased fuel economy), these malfunctions would be difficult to detect and repair without OBD.

Inspection and Maintenance (I/M) programs target these malfunctions, but often cannot detect them because of the limited test conditions possible with current I/M programs. Because OBD can be operable during essentially the full operating range of the vehicle, problems with vehicle operation which may occur during only limited operating conditions but causing significant emission increases can more effectively be detected through OBD.

Both the California Air Resources Board (CARB) and EPA have studied ways to use OBD systems to detect emission problems. In 1985, CARB promulgated California state regulations which required the vehicle's on-board computer to monitor the oxygen sensor, the EGR valve, and the evaporative purge solenoid for proper operation and to provide a warning to the vehicle operator when any malfunctions occurred. That set of regulations is known as OBD I and took effect beginning with the 1988 model year.[6]

However, OBD I does not require monitoring of several critical emission-related components (e.g., catalyst, evaporative system vapor leaks) and does not require sufficient sensitivity to detect significant malfunctions of components that are monitored (e.g., electrical circuit continuity of the oxygen sensor was required, rather than a more complete check of actual oxygen sensor operating characteristics). CARB has promulgated new OBD regulations, OBD II,[7] which provide more stringent requirements and other improvements to the OBD system. Such requirements include catalyst monitoring, evaporative emission control system leak detection, monitoring of the operational characteristics of the oxygen sensor, and detection of engine misfire. These OBD II requirements would be implemented by manufacturers installing specific CARB mandated OBD systems in their LDVs and LDTs. OBD II is scheduled for phase-in beginning with the 1994 model year, with full compliance by the 1996 model year. EPA has worked closely with CARB in developing both the technology and the enforcement aspects of the OBD II regulations.

After passage of the CAAA, the Agency published a notice of proposed rulemaking on September 24, 1991, requiring OBD on all new vehicles beginning with the 1994 model year. This final rulemaking adopts the proposed regulations with some exceptions as discussed later in this preamble.

The regulations promulgated today differ from California's OBD II rule in some respects. The requirements being promulgated today are expressed as emission performance standards, rather than the more design-oriented approach taken in the OBD II requirements. Emission performance standards provide the manufacturer with flexibility in determining which components or systems the OBD system should monitor and how to monitor them. Manufacturers will be allowed to determine the most appropriate means of monitoring without seeking Agency regulatory approval. However, manufacturers may have the additional burden of selecting OBD system calibrations that ensure each unique design they produce complies with emission performance standards, and that their unique designs perform to the level required under these regulations.

The Agency expects that manufacturers will be able to develop identical systems to comply with both Federal and California regulations, but additional testing and calibrations development may be necessary for manufacturers to assure proper optimization of their systems. EPA has estimated these incremental costs and has included them under the category of "Application Costs" in the Regulatory Impact Analysis (RIA).

In response to concerns regarding this incremental burden, especially as it might impact implementation during the initial model years, EPA has decided to accept compliance with the California

[4] Memorandum from Todd Sherwood to OBD Docket No. A–90–35 regarding the Ninety Day Effective Date on OBD Final Rulemaking, January 12, 1993

[5] Regulatory Impact Analysis: On-Board Diagnostics, Appendix I; Air Docket No. A–90–35.

[6] Title 13 California Code § 1968 (p. 614.16.1)

[7] Title 13 California Code § 1968.1.

OBD II requirements as an alternative means of meeting certain portions of the Federal requirements through the 1998 model year. Beyond the 1998 model year, full compliance with the Federal OBD rule will be required.[8]

III. Requirements of the OBD Final Rule

A. General System Requirements

The primary purpose of section 202(m) is to require manufacturers to install OBD systems to detect malfunctioning or deteriorated performance of a vehicle's emission-related components. The OBD system's secondary purpose is to aid in the proper diagnosis and repair of those emission-related problems.

The Act requires EPA to promulgate regulations requiring OBD systems that are able to accurately identify any emission-related deterioration or malfunction that could cause or result in exceedance of an emission standard. EPA acknowledges that a properly designed and operating vehicle could have emission levels approaching or even equaling the emission standards. In such cases, a very slight malfunction or minor deterioration, which may be infeasible to detect using OBD, could result in failure to meet an emission standard.

In other situations, a vehicle might not experience much emission performance deterioration even though an individual component's performance has reached a detectable level of malfunction or deterioration. Replacement of the component at this stage would provide little emission benefit, especially considering the cost of the repair, and could, in fact, be inappropriate if the component was incorrectly identified as having reached a detectable level of malfunction or deterioration.

Therefore, EPA is adopting a threshold approach to define the performance requirements of the Federal OBD system. Under this threshold approach, when a malfunction or deterioration of a specific emission-related component or system causes emissions to increase significantly, compared to what the emissions would be if the malfunction had not occurred, the OBD system would be expected to detect and flag the component as malfunctioning. For example, under the regulations promulgated today, if deterioration or malfunction of a vehicle's oxygen sensor is resulting in an emission increase of 0.2 g/mi HC, 1.7 g/mi CO, or 0.5 g/mi NO_x, compared to what emissions would be if the oxygen sensor was working properly, then the vehicle's OBD system must detect this oxygen sensor malfunction and indicate that it has occurred. If the OBD system does not detect such malfunctions, it may be denied certification or be subject to recall. EPA's testing procedures for enforcing these regulations are discussed in section III.G below. EPA's reasons for using this approach are discussed further in section V.E.

The threshold approach also allows EPA to recognize both the technological feasibility of malfunction detection with OBD and the costs and emission benefits of subsequent repairs. EPA has required the OBD system to detect only those problems which can reliably be detected and whose repair would result in a significant improvement in emission performance. Thus, as discussed in detail in the NPRM, the threshold levels promulgated by EPA represent the minimum levels of significant emission impact which are technologically feasible to detect. As other information becomes available to EPA demonstrating the technological feasibility and appropriateness of setting lower threshold levels, EPA would plan to propose revisions to these thresholds.

The rulemaking places a minimum of specific monitoring requirements on the manufacturer. As required by the Act, the OBD system must monitor catalyst and oxygen sensor performance. In addition, the OBD system must monitor for and detect engine misfire and electrical disconnection of the evaporative purge control and any emission-related powertrain component or system which directly or indirectly sends information to or receives information from the vehicle's computer. The two requirements for misfire and electrical disconnection have changed slightly from the proposed requirements. For safety reasons, there will not be a requirement for fuel shut-off to misfiring cylinders, and detection of electrical disconnects and other malfunctions has been limited to powertrain components and electronic evaporative purge control as a result of EPA's conclusion, after extensive public comments, that the proposed language required broader monitoring than that contemplated under the CAA. These changes are discussed in more detail below.

These regulations also require a malfunction indicator light (MIL) on the vehicle dashboard that illuminates if component deterioration or malfunction causes emissions to increase above the threshold levels specified in these regulations, or if loss of electrical circuit continuity of a monitored component is detected. The purpose of the MIL is to inform the vehicle operator of the need for service when the vehicle is operating under potentially high emitting conditions.

Evaluation of a vehicle's OBD system at 75°F should be adequate for ensuring proper system operation at cold ambient temperatures. EPA believes that the advent of cold temperature CO standards will result in the development of emission control strategies at cold ambient temperatures that are more consistent with emission control strategies currently designed for 75°F standards. As a result of this enhanced control, it is anticipated that any significant emission increase occurring at cold temperatures due to component malfunction or deterioration will be detectable by a vehicle's OBD system at 75°F.

EPA expects that manufacturers will install OBD systems that are feasible and accurate, which will minimize false malfunction indications and potentially needless repairs, and thus will gain consumer credibility and acceptance. Consumer acceptance is a crucial aspect of the OBD program because OBD's effectiveness relies heavily on drivers responding positively to an illuminated MIL by taking the vehicle for repair. It is a workable system that will lead to the repair of malfunctioning vehicles that contribute to air quality problems throughout the nation. EPA intends to monitor closely the development of OBD technology, consumer acceptance, and emission control strategies. As appropriate, EPA will revisit these issues and revise its OBD regulations.

B. Standardized Codes and Accessibility

Section 202(m)(4) of the Act, as amended, requires that OBD system information be unrestricted and accessible to anyone via standardized connectors without requiring access codes or any device only available from the manufacturer. Further, the OBD system information must be usable without need for any unique decoding information or device. To satisfy these mandates, EPA is requiring that OBD systems conform to uniform industry

[8] Beginning with the 1999 model year, California will also accept systems meeting Federal requirements as automatically satisfying California OBD requirements for vehicles designed to meet Tier 1 standards, see CARB Mail-Out #92-56.

[9] See SAE standards ##J1850, J1877, J1892, J1962, J1979, J2012, and J2186 in effect at the time of publication of this rule. Copies of these standards have been placed in the docket for this rulemaking. Note that SAE standards ##J1978 and J2205, and ISO 9141, included in the proposed rulemaking, are not incorporated into this final rulemaking. These documents had not been published as final standards at the date of publication of this final rule; when these documents are published as final,

Continued

standards adopted through the Society of Automotive Engineers (SAE) and be accessible with the use of a standard hand-held diagnostic tool.[9] EPA has reviewed these SAE standards and believes they accurately and completely specify the needed requirements. In addition to "freeze-frame" information giving engine operating conditions at the time of the malfunction, the rulemaking requires that the following information be provided over the standard data link connector, if the information is available to the on-board computer or can be determined using information available to the on-board computer: calculated load value, diagnostic trouble codes, engine coolant temperature, fuel control system status, fuel trim, fuel pressure, ignition timing advance, intake air temperature, manifold air pressure, air flow rate from the mass air flow meter, engine RPM, throttle position sensor output value, secondary air status, and vehicle speed. EPA believes this information is valuable in diagnosing malfunctions and performing appropriate repairs, and it is also required by California's OBD II regulation. In addition, to increase vehicle repairability and specific to the Federal OBD rule, the regulations require that the vehicle be capable of performing bi-directional diagnostic control (i.e., the ability to not only receive information from the vehicle's computer but also control the status of various sensors by sending control signals to the vehicle's computer) based on SAE communication specifications on demand through the serial port on the standardized data link connector.

The final regulations for this requirement are identical to those in the proposed regulations, except that air flow rate and vehicle speed have been added to paragraph (f)(2) of § 86.094–17 after having been inadvertently excluded from the proposed regulations. EPA received no public comments specific to the proposed requirements for standardization and accessibility of stored computer information. Comments on the conditions for freeze-frame storage are discussed in section 3 of the Response to Comments document in the OBD docket.

C. Anti-Tampering Measures

With today's rulemaking, EPA is requiring that manufacturers protect their on-board diagnostic computers from tampering. The method employed is left to the manufacturer's choice. Such methods could include soldering chips to their circuit boards, enclosing ("potting") the computer in a material such as polyurethane, or otherwise permanently sealing the computer housing. Write-protect features are required for flash memory systems. This OBD regulation requires adherence to SAE standard #J2186, which has been developed to meet CARB's OBD II requirement for write-protection.

Today's rule also requires manufacturers to use a single dashboard MIL to indicate all emission-related problems detected by the OBD system. The purpose being to prevent a proliferation of warning lights that could lead to driver confusion. Manufacturers may install warning lights separate from the MIL intended to alert the driver to safety problems or problems related to engine operation which could result in immediate damage, such as low oil pressure or over temperature conditions. (Separate warning lights for engine temperature, oil level, and alternator performance will continue to be allowed). EPA believes the requirement to have a single MIL for all emission-related problems is consistent with California's OBD II requirement.

To discourage tampering, the MIL must illuminate when the vehicle's ignition is in the "key-on" position each time the vehicle is started. This will facilitate in-use inspection to determine that the system is functioning. The MIL will go off after the engine is started unless a malfunction has been detected. Illumination of warning lights during key-on is already common practice in the auto industry.

The regulations also require that a readiness code be stored in the on-board computer to indicate when the diagnostic system has completed all monitoring checks and determined that all monitored systems are functioning properly. The readiness code will ensure I/M testing personnel and service technicians that malfunction codes have not been cleared since the last OBD check of the vehicle's emission-related control systems. This code will be essential if OBD checks are ever to replace tailpipe tests in I/M programs, since I/M personnel must be sure that the OBD system has had sufficient time to completely check all components and systems. The readiness code is also crucial for indicating to service personnel whether any repairs have been conducted properly; if the readiness code appears indicating a full functional check has been completed without any malfunctions being detected, the repair has been successful. As noted in the following section on Monitoring Frequency, a full evaluation of the monitored systems may require extended vehicle operation to satisfactorily verify emission-related component or system performance.

In addition, aftermarket parts must be fully compatible with the OBD system. Installation of aftermarket parts which prevent the OBD system from performing its proper function will be considered tampering. Questions regarding potential tampering due to installation of aftermarket parts will be considered in the same manner as EPA considers devices or actions which could affect emission performance.

The anti-tampering provisions of the final regulations are identical to those proposed, except for the addition of paragraph (b) to section 86.094–18, which accepts demonstration of compliance with the OBD II tampering protection features through the 1998 model year.

D. Monitoring Frequency

EPA expects that the OBD system will evaluate component performance as often as possible. Therefore, EPA is requiring that all components monitored by the OBD system be evaluated at least once every trip, with one CVS–72[10] driving cycle qualifying as a trip. Manufacturers may monitor emission-related components more frequently to avoid component damage or assure a reliable assessment of component performance.

The monitoring frequency provisions of the final regulations are identical to those proposed.

E. MIL Illumination

Upon malfunction determination by the OBD system, EPA is requiring illumination of the MIL on the vehicle dashboard. Once illuminated to indicate a malfunction, the MIL must remain illuminated during all periods of engine operation until the trouble codes stored in the on-board computer are cleared by a service technician or after repeated re-evaluation by the OBD system fails to detect a reoccurrence of the problem (see discussion following). This will eliminate confusion caused by those OBD designs which turn off the MIL when the ignition key is turned off with no re-illumination upon restart.

EPA will allow manufacturers to extinguish the MIL only if no reoccurrence of the problem is detected As in California's OBD II regulations, EPA is allowing the manufacturer to extinguish the MIL after three subsequent sequential driving cycles of

the Agency intends to incorporate them into the Federal Regulations, perhaps in the forthcoming final rule on service information availability.

[10] The CVS–72 driving cycle is equivalent to the Urban Dynamometer Driving Schedule [UDDS] as defined in 40 CFR part 86, Appendix I, paragraph (a).

similar operation (as discussed below) in which a system fault did not reoccur. EPA will also allow the computer-stored fault code to be cleared after forty (40) engine warm-up cycles if the same fault is not reregistered. These requirements will serve as the minimum number of warm-up cycles without reoccurrence of a malfunction before extinguishing the MIL or clearing the computer of fault codes. Manufacturers may determine more extensive operation is appropriate for their particular vehicle designs.

EPA is requiring the same MIL illumination and extinguishing criteria for all malfunctions California has adopted for misfire and fuel system malfunctions. Specifically, before extinguishing the MIL, the vehicle must be operated over three subsequent sequential driving cycles under which similar operating conditions have been experienced. As with the OBD II rule, similar operating conditions are defined as being within ten (10) percent of the load condition and 375 rpm with the same engine warm-up status which existed when the malfunction was first determined.

Current OBD systems incorporate a MIL displaying a phrase such as "Service Engine Soon." EPA is not specifying the exact wording for the MIL, but EPA retains the right to disapprove any wording other than "Check Engine" or "Service Engine Soon" if EPA believes that wording does not adequately alert the driver of the need for repairs or makes an unfair indication of when or where to have repairs done (e.g., "Service Soon at Dealer").

EPA is requiring the MIL to blink continuously during periods of engine misfire that could potentially damage the catalyst. This requirement is changed from the proposed requirements under which the MIL was required to blink during any misfire condition. Public comment suggested, and EPA agrees, that requiring the MIL to blink under any misfire condition may result in the MIL blinking often enough that the driver may ignore the blinking effect. However, it is necessary to have the MIL blink when misfire conditions could damage the catalyst to alert the driver to the high emitting operating condition possible during these misfire conditions and to prevent catalyst damage from actually occurring. The regulations require the manufacturer to determine the misfire conditions under which catalyst damage would potentially occur and, thus, the conditions under which the MIL must blink.

F. Repair Information Availability

This rulemaking does not contain the final requirements under which information necessary to perform repair and maintenance service on OBD systems and other emission-related vehicle components would be made available to the service and repair industry. Such requirements will be contained in a forthcoming Agency rulemaking.

G. Enforcement

Certification

Certification enforcement of the OBD requirements is composed of three aspects: (1) Manufacturers are required to submit documentation of OBD system design for Administrator approval; (2) EPA will perform audit testing of emission data vehicles, fuel economy data vehicles, and assembly line vehicles; and (3) EPA will evaluate results of in-use testing programs, such as the in-use compliance and emission factors programs, for vehicles with similar OBD systems to that under certification evaluation. The proposal discussed a fourth aspect of certification addressing compliance with information availability requirements. This fourth aspect will be addressed in the forthcoming Agency rulemaking on Repair Information Availability.

Manufacturers shall be required to provide EPA with sufficient documentation on the OBD system design to permit the Agency to perform a thorough evaluation of the effectiveness of the proposed OBD system. Although the regulations do not require that a manufacturer supply information which supports the decision *not* to monitor specific components or systems, the manufacturer should have such information available and EPA retains the right to access such information consistent with section 208 of the Act.

EPA is not requiring manufacturers as part of the certification program to routinely demonstrate via test data that their vehicles conform to these OBD regulations. EPA retains the right to audit manufacturers' OBD designs by selectively evaluating individual designs over a wide range of potential malfunctioning conditions as described below. If a manufacturer's design fails this audit evaluation, the manufacturer will be denied certification for vehicles equipped with that OBD design.

During certification testing of vehicles certified to Federal OBD, EPA could individually cause one or more of the following malfunctions on any emission data vehicle or other vehicle approved by the Administrator. To evaluate a system's O_2 sensor, catalyst, or misfire monitoring, EPA could install or simulate a deteriorated O_2 sensor or catalyst or induce misfire. If the MIL illuminated and proper codes were set, the OBD system would comply with requirements to detect these malfunctions. If the MIL failed to illuminate, the OBD system would pass certification only if the increase in emissions due to the individual malfunction was less than the threshold levels being established by this rulemaking. During certification testing of vehicles certified to Federal OBD, EPA may electrically disconnect the evaporative purge control (if equipped) or any emission-related powertrain component (one at a time) that directly or indirectly receives information from or transmits information to the on-board computer, such as the auxiliary air system or engine coolant temperature sensor. The OBD system will pass certification if the MIL illuminated and proper codes were set for any electrical disconnection. Such electrical continuity audits may be done on any emission data vehicle or assembly line vehicle.

During certification of vehicles certified to California OBD II, EPA may conduct audit and confirmatory testing consistent with the provisions of the OBD II rule. Therefore, while the Agency will consider California certification in determining whether to grant a Federal certificate, EPA may also elect to conduct its own evaluation under OBD II rules for OBD systems the manufacturer is electing to voluntarily certify according to OBD II rules.

EPA also reserves the right to evaluate any other pertinent data or information in deciding whether to grant a vehicle a certificate. In determining whether an OBD system should be certified, EPA may take into consideration information on the system's previous performance in actual use should such performance exist, including emissions and MIL illumination on in-use vehicles tested under the in-use enforcement and emission factors programs or any other in-use testing program. Data from in-use vehicles would be particularly important in determining whether manufacturers would be allowed to "carryover" an OBD system from one model year to another.

The certification provisions of the final regulations are essentially the same as those proposed, except that the proposed requirements pertaining to information availability and service information plans have been deleted.

In-Use Compliance

In-use enforcement of the OBD regulations will focus on whether the OBD system detects an emission-related malfunction or deterioration that actually occurs in-use. In determining, under the provisions of section 207(c), the conformity of in-use vehicles with the performance requirements of the Federal OBD regulations, EPA will test any in-use vehicle, regardless of proper maintenance or use, as long as the vehicle's maintenance and use did not affect the proper functioning of the OBD system itself. Vehicles with detectable exhaust system leaks will first have these leaks repaired. Since the portion of the FTP used to measure exhaust emissions does not measure the emissions from such leaks, EPA's evaluation of OBD performance will not penalize a manufacturer for exhaust system leaks.

EPA will target in-use vehicles with emissions exceeding the applicable standards for further investigation of OBD system performance. For vehicles certified to OBD II, EPA will conduct in-use enforcement testing within the provisions of the OBD II rule; the following discussion is relevant for those vehicles certified to Federal OBD performance requirements.

If an in-use vehicle is tested and shown to have emissions exceeding applicable standards, an attempt will be made to diagnose and repair the problem or problems causing the high emissions. If any single and identical undetected malfunction of an emission-related powertrain component or the vapor recovery or purge control systems, regardless of whether the OBD system monitored for that malfunction, is repaired and reduces emissions by an amount greater than a threshold level on at least two vehicles of the same general OBD system design, that particular OBD system would be considered faulty.

In such a case, these vehicles will be in violation of the OBD regulations, and they may be recalled under section 207(c) of the Act for defective OBD systems, and certification carryover of that OBD system design could be denied for future model years. Also, if a malfunction found in use was not monitored by an OBD system EPA found to be faulty, future OBD systems by the same manufacturer may be required to monitor for that malfunction, unless the manufacturer could demonstrate to the Administrator's satisfaction that the malfunction will not occur in subsequent model years.

In-use evaluation of OBD system effectiveness at detecting potential evaporative system malfunction for vehicles certified to Federal OBD will be done using the emission threshold of 30 g/test measured over the first 24 hour period of the diurnal portion of the revised evaporative emission test procedure. If a vehicle with an unilluminated MIL or illuminated MIL with no appropriate trouble code is found to fail that threshold, any discernable problems will be repaired. Upon completing these repairs, a 0.04 inch orifice will be created within the vehicle's evaporative emission control system. If the MIL then illuminates during the FTP driving cycle and a proper trouble code is stored, the vehicle's OBD system will be considered acceptable. If the MIL fails to illuminate on at least two vehicles which fail both the threshold and the 0.04 inch evaluation, and both vehicles have the same type of "as received" evaporative system malfunction(s) and the same general OBD system design, that OBD system may be subject to EPA recall. The basis and rationale for the 30 g/test emission threshold and the 0.04 inch diameter orifice are explained in section V.C. of this preamble.

In the case of an OBD system failing to identify an infrequent component failure, the OBD system, not the component, would be the subject of the recall and that recall would occur only if the determination were made that the "failure to identify" would occur on at least two vehicles of the same general OBD design within EPA's limited test sample. In the Agency's opinion, if an identical malfunction occurs on two similar vehicles within EPA's test sample of a manufacturer's fleet (usually only 10 to 40 vehicles) without being flagged by the same OBD system design, that OBD system design is inadequate and has failed to detect a malfunction with considerable likelihood of occurring during in-use operation. As proposed, EPA could effectively have required a recall after finding just one such occurrence within the in-use fleet. However, public comment suggested that such a potentially one-in-a-million occurrence should not be considered sufficient for recall. By requiring two such occurrences within such a small sample, the Agency believes that the malfunction must be occurring with sufficient probability within the in-use fleet to warrant possible recall action. This issue is discussed further in section V of this preamble.

EPA recognizes the need to assure appropriately functioning OBD systems at high mileages. CARB's OBD II regulations do so by explicitly requiring OBD monitoring of essentially the entire emission control system and assuring proper performance at certification time. This way, CARB's OBD II regulations help guarantee the OBD system is capable of detecting problems that might not occur until very high mileage, e.g. over 100,000 miles. EPA's certification program similarly assures OBD designs which should function appropriately and detect high mileage problems with the catalyst, the oxygen sensor, misfire, and electrical disconnection. For other potential problems, EPA's program relies on manufacturer assessment of monitoring needs, backed up by EPA's in-use enforcement program.

The in-use compliance provisions of the final regulations have changed from those proposed, as discussed in detail in section V of this preamble and section 3 of the Response to Comments document in the OBD docket.

EPA's current in-use emission compliance program will continue to test properly maintained and used vehicles regardless of MIL illumination for compliance with existing regulations which require that vehicles conform to emission standards for their useful lives.

IV. Public Participation

On September 24, 1991, EPA published a Notice of Proposed Rulemaking (NPRM) which set forth proposed requirements for on-board diagnostic (OBD) systems on light-duty vehicles and light-duty trucks. The period for submission of comments on the NPRM was scheduled to close on December 9, 1991.

On November 6 and 7, 1991, a public hearing was held. The original comment period was then extended to January 10, 1992, for comments regarding the availability of service information only. In addition, on March 31, 1992, the comment period was reopened for comments relevant to the malfunction detection requirements associated with evaporative emission control system monitoring and for comments relevant to the acceptance of California OBD II requirements. The comment period concerning these two items closed on April 30, 1992.

The CAA requirements regarding the availability of service and repair industry information necessary to perform repair and maintenance service on on-board diagnostic systems and other emission-related vehicle components have elicited extensive comments. Because of the scope of the issues involved and raised by these comments, further analysis is required. As a result, the requirements for making information available to the service industry will be handled in a subsequent regulation.

Comments were received from manufacturers and their associations, mechanics and their trade associations, motor vehicle dealerships, state agencies, and private individuals. The following sections briefly summarize comments on the major issues. For the complete response to comments, see the Response to Comments on the Regulations Requiring On-Board Diagnostic Systems on 1994 and Later Model Year Light-Duty Vehicles and Light-Duty Trucks contained in the public docket for this rule.

V. Discussion of Comments and Issues

Comments on a wide range of issues concerning the proposed OBD system requirements were received. Summarized here are the comments concerning the major or controversial issues and the rationale behind EPA's final decisions. These issues are considered in more detail in the supplemental Response to Comments document prepared for this final rule and included in the docket noted earlier. Also in this Response to Comments document is consideration of other more minor issues whose resolution is reflected in this final rule.

A. Acceptance of California OBD II Requirements

Summary of Proposal

In the NPRM, EPA proposed that OBD designs satisfying the California OBD II rules would satisfy Federal OBD requirements for some initial model years. The purpose was to allow manufacturers sufficient leadtime to evaluate their designs intended to meet California's OBD II rules to assure they also meet Federal rules or are modified as necessary. The model years considered included 1994 through 2002, with the exact interim period to be determined on the basis of additional information from the industry on the necessary changes they anticipated and the resources available to them. After the close of the initial comment period on December 9, 1991, EPA reopened the comment period from March 31, 1992, until April 30, 1992, to take further comment on the issue of accepting California OBD II systems as satisfying Federal OBD requirements. In the notice announcing the reopening of the comment period, EPA stated that its analysis suggested acceptance of OBD II at least through the 1996 model year was appropriate to provide industry sufficient leadtime for incorporating OBD II into their product lines and for making any potential calibration changes deemed beneficial in meeting federal requirements by the 1997 model year, while satisfying the Agency's strong interest in having the more performance based aspects of the federal OBD rule in place as soon as practicable.

Comments: Overwhelmingly, vehicle manufacturers requested that EPA accept compliance with OBD II as satisfying Federal OBD requirements for some period of years. The comments from manufacturers varied as to the length of time during which OBD II should be accepted by EPA, with requests ranging from 1998 to 2002, and even indefinitely. Those requesting indefinite acceptance argued that if OBD II is acceptable at all, it should be acceptable indefinitely. Most based their recommendation on the general view that compliance with the Federal rules would require incremental investment in evaluation and potential redesign of systems satisfying California's OBD II regulations. Some vehicle manufacturers also expressed a need to conduct further in-use performance evaluation before being prepared to satisfy the Federal OBD requirements. Only the State of Colorado recommended Federal OBD implementation as soon as possible; however, its comments do not specifically object to acceptance of OBD II standards. Colorado did mention differences between the information availability requirements of the Agency's proposed rulemaking in comparison to OBD II. However, EPA's acceptance of OBD II requirements would not preclude the need to meet future Agency requirements for information availability. The State of California recommended accepting OBD II through the 1998 model year since the OBD II regulations provide for acceptance of Federally certified OBD systems beginning with the 1999 model year.[11]

Analysis of Comments: No information supplied in the comments supported manufacturers' contention that they would need to develop alternative designs or calibrations to meet Federal rules, compared to OBD II rules. Only one commenter quantified the incremental burden of complying with the Federal rules, and that analysis did not specifically state why the incremental costs were required. EPA believes, based on at least one manufacturer's comment, that manufacturers prefer a longer period of Federal acceptance of OBD II systems to provide additional in-use performance evaluation prior to being held responsible for compliance with the Federal OBD rules.

For the reasons given in the notice of proposed rulemaking, EPA anticipates manufacturers will not need to adopt different hardware to comply with the Federal rules compared to the hardware manufacturers have indicated they will adopt to meet the California OBD II rules. The comments have not persuaded EPA that its expectations are unreasonable. Therefore, the only necessary difference in design might be a need to recalibrate the OBD system to meet the Federal emission thresholds. In EPA's judgement, no more than one additional model year should be required for a manufacturer to conduct a design evaluation, test, and perhaps develop some modifications to OBD calibrations to assure their designs satisfy Federal requirements.

From an in-use durability perspective, manufacturers might perceive the Federal rules as requiring more emphasis on in-use emission performance than the California rules. The clear responsibility of the manufacturer to develop an OBD system capable of detecting in-use problems which result in vehicles exceeding in-use emission thresholds may, in the manufacturers' view, entail greater in-use performance responsibility, necessitating additional in-use evaluation. While EPA does not believe that an additional in-use performance evaluation is necessarily required due to the differences between the California and EPA regulations, Agency understands that this regulation and the OBD II regulation are forcing the development of new OBD technology, and that an in-use performance assessment program could be useful in determining the most appropriate OBD designs for the federal regulations. Given that manufacturers must develop and install the OBD technology across its entire product line within a short timeframe, the manufacturers may not have sufficient time to adequately assess the OBD system's performance under typical in-use conditions. Even under a program designed for rapid feedback, some years could be required to evaluate in-use performance and feed this information back into the design process. The Agency believes that as many as three or four years would be required for such in-use evaluation to allow a substantial number of vehicles to accumulate sufficient mileage to make the evaluation representative of the in-use fleet.

Most manufacturers have indicated they expect to have some portion of their product lines complying with the OBD II regulations for the 1994 and 1995 model years, although each manufacturer may have some designs

[11] CARB Mail-Out #91–57.

which will not comply with the OBD II regulations until the 1996 model year. Thus, manufacturers should be able to begin design evaluation (including in-use evaluation) beginning with the 1994 or 1995 model year. Due to human resource limitations, potential recalibration work by some manufacturers might have to be delayed until after the 1996 model year, after completing their work in developing systems capable of meeting the California OBD II regulations for the 1996 model year. Allowing additional years for in-use evaluation and concurrent work on potential recalibration as may be necessary to evaluate compliance with the Federal certification rules and make any beneficial calibration changes, manufacturers should be able to comply with the Federal rules beginning with the 1999 model year. This is also consistent with the recommendation of the State of California.

As mentioned, some vehicle manufacturers suggested that EPA accept OBD II systems indefinitely. This alternative was neither proposed by the Agency, nor is it an attractive alternative from the Agency's perspective. The Federal regulations contain enforcement approaches consistent with past EPA policies which rely on performance evaluations, rather than specific design requirements, to encourage innovative control strategies and improvements in technology. Also, having effectively two separate regulations mandating the same type of program is unnecessarily inefficient to enforce. Finally, EPA can establish no benefit to manufacturers from having two separate sets of OBD regulations in effect for federal purposes beyond the 1998 model year.

EPA Decision: For the 1994 through 1998 model years, EPA will enforce OBD requirements against either the California OBD II requirements in place as of the publication date of this rulemaking, or the Federal OBD requirements. Beginning with the 1999 model year, full compliance with the Federal OBD requirements will be required for all vehicles covered by this rulemaking. This will assure designs fully meeting the goals of the Federal OBD program, not only for preproduction certification but also during in-use operation.

B. Catalyst Monitoring

Summary of Proposal

The proposed rule required that the MIL must be illuminated upon detection of catalyst malfunction or deterioration before it results in an exhaust emission increase greater than 0.4 g/mi HC, 3.4 g/mi CO, or 1.0 g/mi NO_X as measured on the FTP.

Comments: Comments from several vehicle manufacturers suggested that EPA should set an emission threshold based on an absolute emission level exceedance (i.e., malfunction when emissions exceed a specified emission level, such as the OBD II threshold of 1.5 times the HC standard or roughly 0.6 g/mi) as opposed to a relative emission level increase (i.e., malfunction when emissions increase a specified level above the vehicle baseline) like the one proposed. Manufacturers argued their belief that engine-out emissions tend not to increase over the vehicle's life. Therefore, they believe that the catalyst emission threshold should be a constant, or absolute, emission level above which catalyst failure must be flagged.

Also, vehicle manufacturers argued that the dual oxygen sensor method, currently the most effective means of catalyst monitoring, which compares an oxygen sensor signal placed before the catalyst to one placed after the catalyst to determine the catalyst's operational status, is not capable of distinguishing loss of NO_X conversion capability, and does not distinguish the loss of CO conversion capability as effectively as it does the loss of HC conversion. Therefore, they believe that it would be inappropriate to require monitoring the catalyst for loss of CO or NO_X conversion capability; they believe that monitoring solely for HC conversion capability will lead to more accurate results.

Analysis of Comments: Based on analysis of the comments, the Agency agrees that, in those cases in which engine-out emissions tend to remain constant over the course of a vehicle's lifetime, it is most accurate to structure catalyst failure detection upon a constant emission level exceedance as opposed to an emission level increase. Such a constant emission level criterion also encourages manufacturers to design for low tailpipe emission levels since this would provide a greater margin for catalyst deterioration prior to requiring OBD detection. EPA views encouraging low emission designs as generally beneficial. However, there are circumstances in which engine-out emissions can increase; for example, due to the gradual loss in cylinder compression as the engine wears, especially after high mileage accumulation. In such cases, the vehicle's tailpipe emission level could approach the constant emission threshold criterion without the catalyst having experienced excessive deterioration. As the regulations are intended to monitor a malfunction or deterioration of specific emission-related components or systems, and as the fault codes are intended to accurately indicate the component or system that has malfunctioned, the requirements for catalyst monitoring cannot rely on general emission exceedances to signal catalyst deterioration. The catalyst monitor must be designed such that a trouble code signalling catalyst deterioration can actually be traced to catalyst deterioration. The regulations, therefore, must still require that catalyst-specific deterioration be monitored and that the emission threshold specifically be tied to catalyst deterioration. See the discussion of exhaust emission threshold levels in section V.E of this preamble for more discussion of this issue.

Therefore, EPA has developed a two-tiered approach for the catalyst monitoring threshold which should satisfy both the vehicle manufacturers' and EPA's concerns. Under this approach, the Agency will target vehicles with emissions exceeding 0.6 g/mi HC for catalyst evaluation. Any such vehicle without an illuminated MIL for which replacement of the catalyst decreases tailpipe emissions by 0.4 g/mi would be considered in violation of this OBD regulation.

This differs from the proposal only by the addition of the 0.6 g/mi HC flag. This emission level was chosen on the basis of EPA's belief that it represents the lower limit of reliable detectability, and its consistency with the OBD II regulation. The 0.6 g/mi HC flag has been added to the catalyst monitoring criteria to prevent the flagging of high efficiency catalysts at low mileage. As proposed, a low mileage vehicle with tailpipe emissions of 0.1 g/mi HC would have to flag a catalyst as malfunctioning if emissions had reached 0.5 g/mi HC, even though such a catalyst may still be converting at 75 percent efficiency. The Agency does not want to flag and replace such high efficiency catalysts. The two-tiered approach of the final regulation gives leeway at low mileages to prevent replacement of still high efficiency catalysts.

This catalyst emission threshold also differs from the proposal by eliminating CO and NO_X from the evaluation criteria. EPA agrees with vehicle manufacturers that correlation between the dual oxygen sensor monitoring method and CO conversion within the catalyst is very weak, and that a correlation with NO_X conversion using this monitoring method is not possible. The efficiency of CO conversion, and loss thereof, within the catalyst is

generally affected by the same mechanisms as is HC conversion; therefore, the Agency believes that detection of a loss in HC conversion will generally be indirectly detecting a loss in CO conversion. Additionally, because the correlation between the monitoring method and HC conversion is strong and that with CO conversion is weak, the chance for false diagnosis of CO conversion losses is higher than the chance for false diagnosis of HC conversion losses. For these reasons, the Agency believes that the CO threshold should be eliminated. Also, the Agency knows of no means by which loss of NO_x conversion can be detected; therefore, the Agency believes that the NO_x threshold should also be eliminated.

EPA Decision: On the basis of the comments and further EPA analysis, matched with industry requests for a threshold level consistent with OBD II, catalyst deterioration must be detected before it results in both an exhaust emission exceedance of 0.6 g/mi HC and an emission increase of 0.4 g/mi HC.

C. Technological Feasibility of Evaporative Control System Leak Detection

Summary of Proposal

The proposed rule did not explicitly require monitoring of the evaporative emission control system. However, the proposal required that the OBD system detect any evaporative system malfunction occurring in-use and causing an evaporative emissions increase greater than 2 g/test. Therefore, the manufacturer was given the flexibility to forego monitoring by equipping vehicles with evaporative emission control systems which would not fail during in-use operation. If the manufacturer was confident that no malfunction would occur in-use, there would be no need to monitor the evaporative emission control system using OBD.

Comments: Virtually every manufacturer stated that detection of a 2 g/test emission increase, or detection of a hole so small that emissions increased by such a small amount, was infeasible if measured using the enhanced evaporative test procedure, which is scheduled for phase-in beginning with the 1996 model year through the 1999 model year.[12] Vehicle manufacturers suggested alternative OBD requirements for evaporative monitoring such as detection of a specified orifice within the system consistent with OBD II, or detection of discrete failures such as missing gas caps or disconnected vapor lines. Many vehicle manufacturers also commented that, while preferring an orifice requirement consistent with OBD II, the OBD II requirement of 0.04 inches was both infeasible and unnecessary for improved air quality because, in their opinion, such small holes do not occur in-use.

Analysis of Comments: In developing the proposed 2 g/test evaporative emission threshold, EPA used the diurnal sequence from the current evaporative emission test procedure.[13] The Agency agrees that detection of a problem so slight as to cause no more than a 2 g/test emission increase over the much more rigorous enhanced evaporative emission test procedure is not practicable, if even feasible, since such a small emission increase over that test procedure would correspond to such a small opening in the system that the sensors required for detection would be prohibitively expensive. Therefore, the Agency considered raising the emission increase threshold to reflect the expected (at that time) revision of the diurnal test procedure or setting an orifice detection requirement consistent with OBD II. To gain further insight into the issue, the Agency reopened the comment period from March 31 to April 30, 1992, and participated in a CARB workshop geared largely toward the technological feasibility of evaporative monitoring.

The Agency views the California OBD II orifice detection requirement as a design requirement because it mandates that the evaporative system be monitored rather than allowing the manufacturer to forego OBD monitoring by designing the evaporative system to perform such that the chance for excessive emissions is unlikely. The Agency prefers an emission threshold approach like that proposed because it encourages manufacturers to design more robust evaporative emission control systems in lieu of monitoring through OBD. An emission threshold approach also facilitates in-use enforcement by providing an objective standard (the emission threshold) against which to measure in-use performance.

Considering these factors, the Agency will stay with an emission threshold requirement, realizing that a higher emission level is required to reflect the forthcoming revision of the evaporative emission test procedure and to balance technological feasibility and costs. The Agency believes that it is important to detect loss of system integrity within the evaporative system as soon as possible due to the large amount of fuel vapor which can escape through even very small holes.[14] Industry has argued that very small holes (i.e., less than 0.08 inches) do not occur in-use. However, independent EPA and CARB analyses[15][16] indicate that small holes are present on as many as 9 to 13 percent of in-use vehicles. This finding is consistent with EPA expectations since EPA believes that at least a portion of large leaks start as small leaks. The Agency also believes, like CARB, that detection of very small holes is feasible under proper operating conditions. In meetings held subsequent to publication of the proposed rule, several manufacturers have acknowledged that detection of small holes is feasible, and one automotive supplier has developed a monitoring system capable of detecting holes even smaller than 0.04 inches.[17]

Therefore, because EPA prefers a threshold approach but wants to minimize the development burden placed on manufacturers, EPA has chosen to use a two-tiered approach to the evaporative monitoring threshold, similar to that discussed for catalyst monitoring. This two-tiered approach will consist of a 30 g/test flag followed by a 0.04 inch evaluation test. The 30 g/test flag has been chosen because EPA believes that it represents the typical emission level that would escape from a 0.04 inch hole within the evaporative system according during the first 24 hours of the revised diurnal test procedure. This conclusion is based upon manufacturer-supplied data, which EPA finds to be reasonable, contained in the docket to this rulemaking. The 0.04 inch hole size has been chosen because it constitutes the minimum hole size which EPA and CARB believe can be practicably detected based on manufacturer and independently supplied data contained in the OBD docket. The Response to Comments document for this rulemaking discusses this data in detail.

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[12] Control of Air Pollution From New Motor Vehicles and New Motor Vehicle Engines: Evaporative Emission Regulations for Gasoline- and Methanol-Fueled Light-Duty Vehicles, Light-Duty Trucks and Heavy-Duty Vehicles, signed by the Administrator on January 20, 1993, and soon to appear in the Federal Register.

[13] 40 CFR part 86.

[14] See docket submittals from Toyota, Honda, GM and others in response to the March 31, 1992, reopening of the OBD public comment period, included in section IV–D of the docket for this rulemaking.

[15] Memorandum from Linc Wehrly to Robert Larson regarding Evaporative System Leaks In-Use, September 9, 1992.

[16] CARB Mail-Out #92–27, May 11, 1992.

[17] Memorandum from Linc Wehrly to OBD Docket No. A–90–35, regarding a Siemens Presentation to EPA, dated June 2, 1992.

For the purposes of in-use testing, any in-use vehicle with evaporative emissions of 30 g/test or higher measured over the revised evaporative test procedure will be flagged for OBD evaluation. This evaluation will consist of first making necessary repairs to the evaporative system, then placing a 0.04 inch orifice somewhere within the system. The vehicle will then be tested using the FTP. If the MIL then illuminates during the FTP, the OBD system will be considered in compliance. If the MIL fails to illuminate during the FTP, the OBD system will be considered in violation of this OBD regulation. EPA believes that demonstration of the OBD system's inability to detect evaporative emission malfunctions should be triggered by failure to detect a 0.04 inch orifice, rather than failure to detect evaporative emissions of 30 g/test, because the emissions of 30 g/test could have resulted from a defect other than a defect equivalent to a 0.04 inch hole, but as discussed above, EPA believes 0.04 inches is the minimum hole size that can be practicably detected.

The threshold approach allows the manufacturer either to design and produce an evaporative emission control system that will not fail or that upon failure will not cause exceedance of the emission threshold, or to install a system capable of malfunction detection at the feasibility limit, i.e., detection of a 0.04 inch hole. Manufacturers could meet this using the same OBD evaporative monitoring system as installed on California OBD II certified vehicles. The manufacturer may also elect to incorporate a discrete monitoring method (i.e., one that detects hose disconnections or loose gas caps, but not small leaks such as 0.04 inch holes), thereby reducing costs, by designing an evaporative system which will either not have small leaks or will not exceed the threshold under small leak conditions. The 30 g/test flag allows the Agency to evaluate whether a vehicle not equipped with OBD leak detection within the evaporative system is in compliance because there would otherwise be no performance criteria against which to evaluate the manufacturer's choice to forego such monitoring.

EPA Decision: The Agency has chosen to stay with a threshold approach using a threshold which reasonably approximates the amount of vapors which would leak from a 0.04 inch diameter hole under low pressure conditions. This threshold will be 30 g/test measured during the first 24 hours of the 3 day diurnal which constitutes the revised evaporative emission test procedure. Upon failure of this threshold without MIL illumination and appropriate trouble code storage, the evaporative system will be repaired and a 0.04 inch hole inserted. Failure of the MIL to illuminate during the FTP with this 0.04 inch hole would be considered a violation of OBD regulations. The 30 g/test threshold will thus be used as an evaluation flag, not a performance criterion. The 0.04 inch hole will be used as the performance criterion. Measurement for the 0.04 inch hole would be done during the dynamometer portion of the FTP, which will not be changed by the evaporative test procedure rulemaking.

It is important to note that this OBD evaluation in no way replaces current in-use enforcement procedures, rather it is an addition to those procedures. Therefore, vehicles with evaporative emissions below 30 g/test but exceeding the 2 g/test emission standard would still be considered in violation of emission standards and would potentially be targeted for a conventional emissions recall.

D. Phase-in of Leak Detection Within the Evaporative Emission Control System

Summary of Proposal

Under the proposed regulations, monitoring of the evaporative emission control system for problems would not be mandated, except for monitoring of electrical disconnect of evaporative system components which send information to or receive information from the vehicle's on-board computer. However, in-use enforcement of an evaporative leak detection emission threshold would begin with vehicles certified to the new evaporative emission test procedure being developed by EPA or by the 1996 MY, whichever occurred first.

Comments: All commenters requested that OBD requirements for evaporative emission control system problems be implemented to coincide with phase-in of the new evaporative emission test procedure. However, they did not want to implement OBD requirements beginning with the 1996 MY if the revised evaporative emission test procedures were not fully in effect by that time. Under California's OBD II rules, the phase-in of the evaporative emission monitoring requirement will coincide with the phase-in of the California revised evaporative emission test procedures. The automotive industry commented that full implementation by EPA of the evaporative emission monitoring requirement before full implementation of the new test procedure would be inconsistent with California's requirements and would unnecessarily increase the regulatory burden on manufacturers because development of monitoring techniques would be required for evaporative systems being phased-out within a year or two.

Analysis of Comments: Comments on this issue supported EPA's position that implementation of OBD requirements for evaporative system leak detection prior to phase-in of the revised evaporative emission test procedure would result in significant extra burden on the industry with a poor cost effective environmental benefit due to the high application costs and the relatively low potential total emission reductions. EPA seeks to avoid placing such burden on the industry. However, electrical problems with the purge flow, which fall under the requirement to detect loss of electrical circuit continuity, can be detected economically beginning as early as the 1994 model year. Such an element of an OBD system would not have to be redesigned with subsequent phase-in of the revised evaporative emission test procedure. Adopting such a requirement is also consistent with the Clean Air Act mandates to have OBD monitoring systems in place beginning with the 1994 model year unless technically infeasible. Additional requirements including those necessary to detect leaks or other problems which would disrupt the normal trapping of evaporative emissions could then be phased in with the new evaporative emission test procedure.

EPA Decision: Beginning with the 1994 model year, manufacturers will be responsible for detecting problems related to the purge control operation of their vehicles' evaporative emission control system as electrically monitored by each vehicle's on-board computer. Manufacturers will be responsible for detecting additional problems with malfunction or deterioration of the evaporative emission control system for vehicle designs as they are phased in to comply with the revised evaporative emission test procedures.

E. Emission Threshold Approach and Exhaust Emission Threshold Levels

Summary of Proposal

EPA proposed an emission threshold approach for determination of emission control system deterioration or malfunction, with exhaust emission threshold levels of:

g/mi			
HC	CO	NO_x	
.4	3.4	1.0	Misfire & Catalyst.
.2	1.7	.5	All other problems.

Comments: In general, vehicle manufacturers expressed concern that the threshold levels were too low, especially those for components other than catalyst and misfire. The manufacturers argued the levels are too low because they can require MIL illumination and component replacement for vehicles meeting the standard. Also, manufacturers stated that, because of vehicle-to-vehicle variabilities, malfunction detection is required at even lower emission levels than the thresholds, which will lead to excessive MIL illuminations. Some manufacturers stated that the thresholds require unique calibrations different than the OBD II calibrations and recommended that EPA use the CARB approach of 1.5x the standards. Some manufacturers stated that EPA's thresholds penalized vehicles with low baseline emissions (the design target emission performance of the vehicle) by requiring malfunction detection and MIL illumination at absolute emission levels lower than vehicles designed to have comparatively higher baseline emissions. Some suggested the use of thresholds for primary systems and only function checks for other systems. BMW called the thresholds a good compromise between expected emission reductions and technological reliability. The American Gas Association requested that the HC threshold be set as non-methane HC.

Analysis of Comments: Regarding the issue of thresholds being too low, EPA disagrees. As discussed in the NPRM and the Technical Support Document for the OBD rulemaking, the Agency believes that malfunction detection at the threshold levels is technologically feasible, and that the thresholds strike the appropriate balance between timely flagging of malfunctions and avoidance of false malfunction indications. The Agency also believes that, with the advent of Tier I emission standards and the potential for future reductions in those standards, the chance of OBD flagging of malfunctions on vehicles emitting below the standards is very low.

As for unique calibrations, EPA has carefully reviewed both California's OBD II regulations and the planned Federal OBD regulations and can determine no cases which would require different calibrations to simultaneously meet both sets of regulations. This is not to say that OBD calibrations which satisfy OBD II requirements will necessarily satisfy Federal requirements, or vice versa. For example, it is conceivable that one manufacturer's OBD design may be sufficiently sensitive to calibration such that one set of calibrations selected to meet OBD II rules, for example, may not be sufficient to meet Federal rules. As long as the manufacturer elects to sell the same OBD system in both California and the 49 states, the manufacturer will have to consider the compliance requirements of both sets of regulations. This is exactly the same case as has existed for some time with regard to emission compliance wherein Federal and California requirements have often differed for nominally the same vehicle design. However, the California and Federal OBD requirements are sufficiently similar to allow the manufacturer to design and calibrate an OBD system that meets both sets of requirements. Thus, one OBD design can be sold throughout the nation.

Concerning the issue of how the OBD proposal can variably impact vehicles depending on their baseline emission levels, the basis of OBD detection is on the impact of single component malfunction or deterioration. This approach differs from another possible approach, under which "emission-related system deterioration or malfunction" would be measured by determining a vehicle's total emissions and comparing those emissions to a specific total emission level. A fixed emission level OBD performance standard could be set for OBD performance evaluation; for example, a level above the exhaust emission standard equivalent to the proposed threshold could be used. Thus, for example, such a HC threshold for catalyst problems and misfire on Tier I vehicles could be 0.25+0.4 for light duty vehicles at 100,000 miles. If total emissions were greater than this absolute exhaust emission total, then the OBD system would be required to detect the emission-related system deterioration or malfunction resulting in that total emission level.

EPA believes that basing the standard on performance of individual components is preferable. One of the most important purposes of section 202(m) is to make diagnosis of emission-related problems easier for technicians. The regulations require fault codes to accurately indicate the part or system that has malfunctioned when a malfunction has occurred. In order to ensure that these codes accurately identify the system that has malfunctioned, the OBD system must accurately trace emissions increases to specific components or systems.

In developing the proposal, EPA recognized the significantly greater technological difficulty a manufacturer would have in attempting to detect emission-related system deterioration or malfunction by relying on tailpipe emission performance rather than just the incremental impact of single component deterioration, which should be considerably less variable than tailpipe emissions. Requiring that the OBD system monitor deterioration by using a fixed emission level threshold independent of baseline emissions (the vehicle's emissions under normal, properly operating conditions) would create feasibility and enforcement problems because manufacturers are currently only technologically capable of monitoring for individual component malfunction or deterioration and cannot necessarily detect the synergistic impact of multiple component deterioration as these determine exhaust emission levels. To make the manufacturer responsible for absolute exhaust emission performance would either require stringency potentially much more severe than proposed (due to the need to detect multiple component deterioration and their synergistic impact on exhaust emissions), or much less stringency if the thresholds were raised to compensate for an assumed worse case multiple component deterioration and interaction even though in many cases only single components deteriorate or malfunction.

However, in response to comments specifically referring to how the threshold approach in the OBD proposal would affect catalyst monitoring, EPA is revising its performance requirements for OBD catalyst monitoring. Catalysts function as percent reduction devices. That is, within typical levels of engine-out emissions, a given catalyst will have the same percent emission reduction impact (e.g., if a vehicle with 2 g/mi engine-out emissions has an 80 percent efficient catalyst, the tailpipe emissions for that vehicle would be 0.4 g/mi; if another vehicle with 1 g/mi engine-out emissions has the same catalyst, the tailpipe emissions would be 0.2 g/mi). Because of this, a vehicle designed for very low tailpipe emissions resulting from high catalyst conversion efficiency would be penalized under the proposed OBD requirements in that the OBD system on such a vehicle would have to flag as unacceptable a catalyst with higher absolute conversion efficiency compared to a vehicle having higher tailpipe resulting from lower catalyst conversion efficiencies (e.g., if a vehicle with 2 g/mi engine-out emissions suffers

catalyst deterioration from 80 to 60 percent, its tailpipe emissions would increase 0.4 g/mi, from 0.4 to 0.8 g/mi, causing MIL illumination under the proposed threshold; another vehicle with the same 2 g/mi engine-out emissions and a 90 percent efficient catalyst, or 0.2 g/mi tailpipe, would undergo a 0.4 g/mi emission increase upon loss of catalyst efficiency from 90 to 70 percent, thereby requiring OBD flagging at a higher absolute conversion efficiency). This phenomenon is explained more thoroughly in the technical support document accompanying this final rule. Therefore, EPA has decided to revise the catalyst threshold to help alleviate this concern. Under the final regulations, catalyst deterioration must be detected before it results in both an exhaust exceedance of 0.6 g/mi HC, and an emission increase of 0.4 g/mi HC. For further information, see section V.B.

As for setting non-methane HC thresholds for natural gas fueled vehicles, the Agency proposed total HC thresholds. There is not a universally accepted adjustment factor for a non-methane equivalent of a total HC level. Therefore, selecting any such non-methane OBD threshold would likely benefit from further EPA analysis and public comment. Currently, there are no Federal emission requirements for natural gas fueled vehicles. However, EPA expects vehicles fueled with natural gas to be capable of meeting the same exhaust emission standards as gasoline fueled vehicles (e.g., 0.25 HC at 100,000 miles). It seems reasonable that malfunctions of emission-related components on natural gas fueled vehicles should also be detectable within the same thresholds, regardless of whether this threshold is expressed as non-methane or total HC. Perhaps greater experience with natural gas fueled vehicles will suggest why non-methane HC-based thresholds are more appropriate, at which time EPA would plan to propose adopting such thresholds. Given that there are no natural gas vehicles being certified at this time, it is not appropriate to delay the applicability of these regulations until natural gas fueled vehicles are available and the need for non-methane OBD thresholds for these vehicles can be better established. All of the OBD mechanisms EPA anticipates will be used on gasoline fueled vehicles should work equally as well on natural gas fueled vehicles. Therefore, at this time EPA sees no reason to change the HC threshold for natural gas fueled vehicles.

EPA Decision: Upon consideration of the above discussion, EPA has chosen to change the catalyst threshold to require malfunction detection when the HC emissions have both exceeded 0.6 g/mi and increased 0.4 g/mi. The Agency sees no reason to change the other thresholds, except as discussed above regarding the evaporative monitoring threshold.

F. In-Use Enforcement

Summary of Proposal

During in-use testing, if any single emission-related repair of a malfunction or deterioration that had gone unflagged by OBD caused emission reductions equal to or greater than the thresholds, the OBD system on that vehicle would be considered faulty. The malfunction would then be induced on similar vehicles, or the malfunctioning component would be removed and placed on other vehicles. Emission increases exceeding the threshold without illuminating the MIL on a substantial number of other vehicles could lead to a recall and denial of certification carryover.

Comments: Some manufacturers stated that EPA should not have authority to recall for the redesign of OBD systems certified to Federal requirements. Ford stated that EPA must consider the manufacturer's ability to modify or redesign an OBD monitor. In addition, according to Ford, EPA must demonstrate that the manufacturer actually failed to make a reasonable engineering judgement in not monitoring certain components. Ford also suggested that since OBD, in its opinion, is designed to detect problems on properly maintained vehicles, in-use vehicles must be restored to properly maintained condition prior to evaluation.

Vehicle manufacturers also expressed concern that EPA would base a recall on a one-in-a-million malfunction which OBD had failed to identify. In the industry's opinion, the Agency's provision of flexibility regarding what must be monitored beside the catalyst, oxygen sensor, and engine misfire, is of no benefit because no system can be considered totally fail safe and the Agency's ability to base a recall on such a one-in-a-million malfunction provides too great a risk not to monitor.

Some vehicle manufacturers also expressed concern over the transfer of parts from malfunctioning vehicles to other vehicles, or inducing malfunctions in otherwise properly operating components or systems. Commenters suggested that induced malfunctions would not necessarily be identical to the original malfunction, and the transfer of parts could cause damage to the part or the receiving vehicle, thereby eliminating the validity of any emission effects.

Analysis of Comments: EPA sees no validity in Ford's comment that the Agency does not have the authority to recall OBD systems certified as complying with Federal regulations. Section 207(c) of the Act, which provides for recall of vehicles failing to conform in-use to regulations under section 202, which includes these regulations being promulgated today, gives EPA such authority. Ford also commented that EPA must demonstrate that the manufacturer failed to make a reasonable engineering judgement in choosing not to monitor certain components when making recall determinations. The Agency has purposefully left it up to the manufacturer to determine what components, other than the catalyst, oxygen sensor, and engine misfire, need monitoring based on the belief that the manufacturer is in the best position to know. EPA has also made the manufacturer responsible for the in-use performance of the OBD system providing the manufacturer the incentive to carefully consider what components should be monitored. It would seriously undercut this incentive if EPA had to establish that the manufacturer's judgement was unreasonable prior to conducting a recall. EPA believes the flexibility and the responsibility of its OBD program go hand-in-hand. Thus, the Agency considers that in-use testing indicating component malfunction or deterioration causing emission increases beyond the specified thresholds without OBD flagging is sufficient to establish in-use liability.

In addition, restoring vehicles to their properly maintained condition prior to in-use evaluations of OBD would undermine the purpose of in-use enforcement of OBD regulations. Because the OBD system is intended in part to flag the lack of proper maintenance, the effectiveness of OBD would be greatly diminished by allowing improper maintenance to go undetected.

On the issue of one-in-a-million malfunctions causing recalls, the Agency shares the industry concern. Although OBD is intended to detect both common and rare malfunctions, the Agency does not believe it is cost effective to initiate a recall based on a one-in-a-million problem. For example if the throttle position sensor is improperly wired or installed during production, it could cause intermittent short circuits within the electrical system of the vehicle. Such short

circuits could cause problems within the onboard computer and, hence, the OBD system itself while also causing increased emissions. Such a problem may go undetected by OBD and cannot realistically be predicted by the manufacturer during preproduction design and calibration work. Therefore, this type of malfunction should not be the basis of an OBD recall.

Considering these arguments, the Agency has revised its approach to in-use enforcement in these final regulations. If an identical type of malfunction is found to cause emission threshold exceedances on at least two similar vehicles with similar OBD systems (i.e., systems containing the same monitoring sensors and strategies) within EPA's limited test sample of a manufacturer's fleet without being properly detected by the OBD system, the Agency will consider recalling that OBD system. In the Agency's opinion, finding two identical malfunctions within a limited test sample (typically 10 to 40 vehicles) indicates that the malfunction is not a one-in-a-million problem. Also, the Agency views this approach as less stringent than the proposal because the proposal required finding the malfunction on only one vehicle and then transferring that part to, or otherwise inducing that malfunction in other vehicles. This transfer of parts or inducing of malfunctions was a serious concern for manufacturers. The Agency believes that the approach discussed here alleviates that concern since no such transfers or inducing of malfunctions would be required. The manufacturer would still have the opportunity to provide EPA with information and data on their behalf as is always allowed during recall investigations.

EPA Decision: An OBD recall would occur only if the determination is made that the failure to identify a malfunction would occur on at least two vehicles of the same general OBD design within EPA's test sample. If the identical type of malfunction occurs on two similar vehicles within EPA's test sample of the manufacturer's fleet without being flagged by the same OBD system, the system design will be considered inadequate.

G. Waiver Provisions

Summary of Proposal

Manufacturers may request waivers from OBD compliance during the 1994 and 1995 model years; EPA proposed no blanket waivers, except that manufacturers were not required to detect leaks within the evaporative system until the 1996 model year. EPA proposed that, upon being granted a waiver from full OBD compliance, the manufacturer would have to install, at a minimum, an OBD system equivalent to a California OBD I system, and provide EPA with a justification for why more than OBD I could not be done.

Comments: Some small volume manufacturers (SVM) and a manufacturer of diesel vehicles requested they be given waivers from complying with OBD regulations until the 1996 model year based on resource constraints and supplier delays. Virtually every vehicle manufacturer requested that upon being granted a waiver from full OBD compliance, EPA simply accept OBD I systems based on the poor cost effectiveness of incorporating small improvements over OBD I and the resource constraints that manufacturers will be experiencing during the next few years in their efforts to comply with OBD II and Federal OBD requirements.

Analysis of Comments: The CAA requires that vehicles comply with EPA's OBD regulations beginning with the 1994 model year unless EPA determines that it would be infeasible for any class or category of motor vehicles to meet the regulations in the 1994 or 1995 model years. The commenters did not provide EPA with information sufficient for EPA to determine that a blanket waiver is appropriate for either SVMs or diesel vehicles in the 1994 or 1995 model years. EPA cannot, on the basis of this record, grant such a waiver. However, a manufacturer may petition individually for a waiver and therein provide evidence that compliance would be infeasible for a class or category of vehicles that it manufactures.

After further consideration, EPA believes that making small improvements to OBD I systems is neither productive nor cost effective and, therefore, agrees that an OBD I system should be adequate upon being waived from full OBD compliance. Comments concerning waivers from evaporative system monitoring were covered in Section V.D, above.

EPA Decision: Considering the above analysis, no blanket waiver will be provided to SVMs or diesel vehicles. Also, OBD I will be considered acceptable upon being waived from full OBD compliance. Moreover, as there may be some engine families with very low sales volumes that have never been equipped with an OBD I or similar OBD system, EPA may make special considerations by granting waivers for the 1994 model year to a system less than OBD I. EPA will consider such factors as manufacturer projections of very low sales volume for an engine family (e.g., 5000 or less), scheduled phase-out of significant engine technology with the 1994 model year for that engine family, and whether or not the engine, or any similar engine within the manufacturer's product line, has ever been equipped with an OBD I or similar OBD system in making waiver decisions to a system less than OBD I.

H. Diesel-Fueled Vehicle Requirements

Summary of Proposal

Diesel-fueled vehicles were expected to comply with the same emission thresholds and enforcement criteria as were gasoline vehicles.

Comments: Mercedes-Benz commented that the proposed thresholds would either not apply to diesels (e.g., diesel vehicles have no evaporative system or oxygen sensor) or would not be reached in actual use (e.g., the catalyst threshold could never be exceeded). Therefore, they suggested that the regulatory language state that diesels need not monitor through OBD provided the manufacturer could demonstrate that there was no need.

Analysis of Comments: The Agency recognizes that certain provisions of the proposed rulemaking may not apply to some diesel vehicles. For example, light-duty diesels lack certain emission control components such as oxygen sensors and evaporative emission control systems. Also, the Agency believes that diesel-powered vehicles are capable of meeting the Federal emission standards without the use of a catalyst, making catalyst malfunction detection only a minor concern, if a catalyst is even present. EPA also believes that engine misfire within diesel engines is of very little concern since its effects on emissions are small, and its effects on catalysts and other aftertreatment devices is negligible due to the low exhaust gas temperatures inherent in diesel engines.

Therefore, EPA has revised the final regulations such that diesel vehicles have an explicit requirement to monitor only electrical disconnects within electrical systems sensed by an on-board computer (the same electrical disconnect requirement being adopted for gasoline-fueled vehicles). The only other requirements will be that in-use vehicles detect malfunctions prior to emissions exceeding the specified thresholds if such malfunctions are likely to occur or may cause such emission increases. A more thorough analysis is included in the Response to Comments document. *EPA Decision:* The Agency decision is stated in the above analysis.

I. Misfire Fuel Shut-off

Summary of Proposal

Upon detecting engine misfire in vehicles equipped with sequential fuel injection and causing a threshold-exceedance, the fuel supply to the misfiring cylinder must be shut off.

Comments: Many vehicle manufacturers expressed safety concerns with this proposed requirement, stating that shutting off the fuel during passing maneuvers could cause an unexpected power loss and potential accidents. Some vehicle manufacturers stated that emissions would actually increase during fuel shut-off.

Analysis of Comments: The Agency agrees with industry comments concerning safety, and agrees that on some vehicles emissions may, in fact, increase during fuel shut-off.

EPA Decision: The fuel shut-off requirement has been eliminated.

J. Monitoring Limitation to Powertrain Components

Summary of Proposal

The OBD system was expected to detect catalyst, oxygen sensor, and misfire problems, and any other emission-related malfunction or deterioration causing emissions to increase beyond specified thresholds.

Comments: Virtually every vehicle manufacturer requested that EPA be consistent with the wording of the California OBD II regulations and require detection of malfunction or deterioration of only emission-related powertrain components. This would eliminate concerns with the proposed requirements that the OBD system must detect malfunctions of components that are not considered part of the emission control system, such as a rear window defogger or seizing brakes which could cause emission threshold exceedances. Such an interpretation of the OBD requirements would go beyond the monitoring requirements anticipated by the Agency in developing these regulations.

Analysis of Comment: The Agency agrees with these comments and manufacturer requests. EPA believes it is reasonable to limit the monitoring requirements to powertrain components and the evaporative system because these systems comprise what is classically the emission control system and because current technology OBD systems cannot be expected to monitor and detect malfunctions occurring anywhere on the vehicle due to cost and computer memory constraints. Furthermore, at this time, EPA does not believe that problems such as rear window defogger failure or seizing brakes contribute substantially to the in-use emission problem.

EPA Response: OBD monitoring requirements will be limited to emission-related powertrain components, with other explicit requirements as discussed.

K. Limitation to Vapor Leaks on Evaporative Monitoring

Summary of Proposal

Leaks in the evaporative system must be detected prior to exceedance of a 2 g/test emission threshold.

Comments: Some vehicle manufacturers commented that the evaporative system leak detection requirement should be limited to vapor leaks, since detection of liquid leaks is not feasible with any known technologies.

Analysis of Comments: EPA agrees that liquid leaks within the evaporative system cannot be detected using currently available or foreseeable OBD methods. A manufacturer with consistent liquid leak problems would presumably suffer owner complaints (e.g., poor fuel economy, smell of gasoline fumes, etc.) and would likely fail emission testing under current in-use enforcement practices, both serving to encourage the manufacturer to improve its design and eliminate such problems.

EPA Response: The evaporative system emission threshold will be limited to vapor leaks.

L. Durability Data Vehicle (DDV) Requirements

Summary of Proposal

For DDVs equipped with OBD, unscheduled maintenance shall only be performed if the malfunction is detected by OBD and the MIL has illuminated.

Comments: General Motors commented that the proposed requirement should be changed such that, in addition to current maintenance criteria, unscheduled maintenance could be approved by EPA and performed by the manufacturer when, but not only when, the problem is detected by OBD and the MIL has illuminated. Without such a change, manufacturers would be precluded from conducting non-OBD flagged unscheduled maintenance if they chose to include an OBD system on a DDV. This would, in effect, discourage a manufacturer from installing an OBD system on a DDV and would unnecessarily limit the manufacturer's ability to request unscheduled maintenance for other reasons.

Analysis of Comments: EPA agrees with the comment from General Motors.

EPA Response: The final regulations include a provision such that, in addition to current maintenance criteria, unscheduled maintenance upon OBD detection and MIL illumination may be approved by the Administrator.

VI. Cost Effectiveness

The following is a summary of the analyses behind the cost effectiveness estimates generated for this final rulemaking. More detailed information is contained in the final version of the Regulatory Impact Analysis in the OBD docket, #A–90–35.

A. Emission Reductions and Air Quality Impacts

The analysis of the estimated emission reductions associated with OBD assumes that OBD will identify and cause to be repaired those vehicles in all I/M areas which are capable of being identified by an enhanced I/M test, specifically the IM240 test;[18] this assumption will be verified during the initial years of OBD implementation. Since OBD equipped vehicles will not constitute a significant portion of the fleet for several years, and because the existing I/M tests will be identifying malfunctioning vehicles during that time, emission reductions are not attributed to OBD until the year 2005. By that year, roughly 73 percent of the in-use fleet will be OBD equipped, and an increasingly significant number of these will be reaching higher mileages where repairs will be more typically required. Further, the existing I/M test equipment will likely be aged to the point of requiring significant maintenance and perhaps replacement. Therefore, instead of potentially investing large sums of money in updating all their I/M test equipment, this analysis presumes that I/M programs begin using a check of the OBD system to make pass/fail determinations on OBD equipped vehicles during I/M inspections. Pre-OBD vehicles would continue to be subject to the previous I/M procedures.

This cost effectiveness analysis presumes the I/M programs in the year 2005 and beyond rely on the OBD system to detect problems. The analysis presumes the current I/M program exhaust emission and evaporative control system leak detection tests are eliminated. As the year 2005 approaches, the Agency will evaluate both the I/M programs existing at that time, and the success of the OBD program to determine what program or

[18] 57 FR 52950 (November 5, 1992).

combination of programs should continue. The current analysis suggests the two programs should identify much the same problems. Therefore, the Agency may reevaluate the interrelationship of the two programs at that point.

The analysis also assumes that outside I/M areas, there are no emission reductions due to OBD. This constitutes an underestimate of the potential emission reductions of OBD. This differs from the analysis supporting the proposed rulemaking which assumed emission reductions in non-I/M areas would occur, but at lower levels due to lower driver response to an illuminated MIL and lower probability of a malfunctioning vehicle receiving proper repairs in the non-I/M areas.

Therefore, in this analysis, the baseline case represents all non-attainment areas without the emission reductions of tailpipe I/M programs being realized. The OBD case represents the reductions resulting from identification and repair of any vehicle which would fail the proposed IM240 tailpipe test and any vehicle which would fail the proposed IM240 pressure/purge test.

As Table I shows, when compared to the baseline case, OBD is estimated to result in annual emission reductions of 1.0 million tons of VOC and 7.6 million tons of CO in the year 2020. OBD will also reduce NO_X emissions. Assuming OBD will identify those same vehicles identified by an enhanced I/M program with NO_X cutpoints designed to fail 10% to 20% of the vehicles, OBD would yield NO_X emission reductions of 605 thousand tons in the year 2020 relative to emission levels with no I/M program in place. Emission reductions are presented for the 2005, 2010, and 2020 calendar years and illustrate the effect of fleet turnover on the estimated emission reductions. Therefore, 2020 represents the maximum annual emission reduction expected from OBD in I/M areas.

Table I.—I/M Area Emission Reductions Attributable to OBD

[Tons of emissions reduced compared to the baseline case]

	Percent of fleet OBD equipped	Thousand tons		
		VOC	CO	NO_X
2005	73	379	3151	256
2010	90	699	5359	426
2020	99	1024	7631	605

The total emission reduction between the years 2005 and 2020 are estimated to be roughly 12.2 million tons HC, 93.3 million tons CO, and 7.5 million tons NO_X. Discounting the annual emission reductions between the years 2005 and 2020 at a 7 percent rate and putting them in present value terms results in total discounted emission reductions attributable to OBD of roughly 4.0 million tons HC, 30.8 million tons CO, and 2.5 million tons NO_X.

B. Economic Impacts

1. Effect on Manufacturer Cost

To comply with many of the provisions made in this rulemaking, specific equipment will be required on new vehicles. In addition to these equipment requirements, the need for increased computer size and computing demand will necessitate an expansion of computing capacity, memory, and input/output (I/O) capabilities for the on-board computer. Due to the nature of this rulemaking and its basis on system performance without specific design requirements, manufacturers have considerable design flexibility. Therefore, it is difficult to develop cost estimates since a wide variety of approaches toward meeting compliance are available to the industry. The following discussion summarizes the impact on the cost of a new vehicle imposed by this rulemaking for what the Agency considers to be the most probable approach taken by industry to satisfy the Federal OBD requirements. The specific details of individual component costs are provided in the RIA which accompanies this rulemaking and has been placed in the public docket. The following describes the types of costs and the methodology employed in determining the effect on the new vehicle manufacturer cost.

a. Component and associated hardware costs. Based on the technical feasibility analysis, EPA identified the likely component and associated hardware (wiring, etc.) which a manufacturer would be likely to install to satisfy the Federal OBD requirements. These one-time costs for each of the components and associated hardware were then estimated. If EPA determined the necessary hardware would already be in place (i.e., not added due to these proposed OBD requirements) or that the incremental cost would be negligible, a zero dollar cost was assigned. These individual component and associated cost estimates are as follows:

Table II.—Manufacturer Component Cost Estimates [1]

Crankshaft sensor	$10.00
Camshaft Sensor	10.00
Oxygen sensor	20.00
Temperature/pressure sensor (EGR monitor)	5.00
Pressure sensor (evaporative monitor)	9.00
Solenoid (evaporative monitor)	5.00
Blower motor (evaporative monitor)	8.00
Computer chips	3-6
Microprocessor	3-6

[1] Costs include installation costs such as fittings and wiring.

EPA evaluated the likely vehicle designs and associated hardware which would be in place for the 1994 through 1996 model years without Federal OBD requirements. The incremental design impact of OBD on the 1994 through 1996 model year fleet was then estimated. The incremental design impact was used to predict the additional hardware and associated costs that the manufacturer would incur in building a fleet to conform to OBD requirements. These costs were averaged over the fleet to determine the following per vehicle hardware costs estimated for a typical manufacturer.

Table III.—Weighted Manufacturer Hardware Costs

Crankshaft sensor	$4.70
Camshaft sensor	1.85
Catalyst monitor	18.20
EGR monitor	2.50
Evaporative monitor	18.00
Computer	18.50
Total	59.75

This hardware cost is based on a prediction of design trends through the 1996 model year. These design trends are used to estimate the incremental impact of these OBD requirements. Although EPA expects these design trends would continue (for example, increasing use of downstream oxygen sensors and crank angle sensors), EPA has insufficient information to predict these trends beyond the 1996 model year. Consequently, EPA assumed no increase in the installation rate would occur except due to OBD. The incremental cost in these future years due to OBD, as estimated here by EPA, is overstated to the extent such equipment would have been more frequently installed anyway.

b. Research and development cost. Research and development costs constitute a one-time fixed cost to develop basic techniques for OBD. EPA has determined that the basic techniques necessary to meet California's OBD II regulations should be satisfactory for meeting Federal OBD regulations. No additional OBD techniques need to be developed. Consequently, manufacturers should incur no new research and development costs because of these Federal OBD rules. However, additional testing and calibration costs may be necessary and are estimated below under "application costs."

c. Application costs. Efforts to apply newly developed OBD techniques to meet these Federal requirements will include additional engineering, emission and durability testing, and potential recalibration of the OBD system compared to what the manufacturer would otherwise have to do to meet California OBD II requirements. EPA has estimated application engineering costs at $68 million per year, with the per vehicle cost dependent on annual sales. In a sales year of 15 million vehicles, application costs would be less than $5 per vehicle.

d. Certification costs. The OBD rulemaking requires manufacturers to submit complete documentation and logic diagrams on their OBD systems. The Agency estimates that the production, checking, and review of the required documentation would result in weighted average costs of $4.1 million per year, with per vehicle costs dependent on annual sales. In a sales year of 15 million vehicles, certification costs would be less than $.30 per vehicle.

e. Total manufacturer cost. Summing the above costs gives a total cost to manufacturers of roughly $65 per LDV and per LDT. Note that this per vehicle cost is dependent on vehicle sales because of the application and certification costs as discussed above. Note also that this $65 cost does not include any manufacturer or dealer mark-up.

2. Other Consumer Costs

EPA has developed estimates for other ways in which OBD will save the consumer money. These include the following: Reduced charges for undergoing an I/M inspection since the inspection would consist solely of a quickly conducted check of the OBD system for stored trouble codes; reduced costs to repair many malfunctioning vehicles, whether flagged by a tailpipe test or an OBD system check, resulting from reduced diagnostic time spent by repair technicians and the subsequent reduction in labor costs; and the fuel economy benefits associated with these repairs.

By the year 2005, this analysis estimates that there will be roughly 65 million OBD equipped LDVs and LDTs in 49-state I/M areas. EPA's cost effectiveness model shows that, for OBD equipped vehicles, total I/M inspection costs for that year, assuming inspection consists of an OBD system check, are expected to be roughly $98 million, with repairs totalling $611 million assuming biennial inspections. Without the cost savings of OBD, the inspection costs would have been $326 million, and the repair costs $696 million. Adding the differences in these numbers, respectively, results in consumer savings due to reduced inspection and repair costs of $313 million in the year 2005 alone.

In the year 2005, fuel economy benefits for OBD equipped vehicles would be $511 million, with $406 million attributable to identification of tailpipe emission-type problems and $101 million due to identification of evaporative emission-type problems.

EPA has not been able to adequately quantify some potential cost savings not included in these estimates. Potential cost savings can accrue due to early repairs of malfunctions which, if left undetected and unrepaired, could result in the need for even more costly repairs in the future. Also, improved repair effectiveness should reduce the potential for a part to be unnecessarily replaced in attempting to fix a problem. Repair facilities should also benefit from the availability of generic tools for accessing and using the OBD system in problem diagnosis and repair. These service facility benefits could be passed along to the consumer in the form of lower repair costs. While none of these cost savings have been quantified, all should reduce the cost of OBD implementation.

C. Cost Effectiveness

Based upon the inspection and repair costs and the fuel economy benefits described above, a biennial I/M program based on OBD inspections costs an estimated total of $6.95 billion between the years 2005 and 2020, or roughly an average of $464 million per year. This total cost reduces to roughly $6.71 billion by including the repair savings for OBD equipped vehicles between the years 1996 and 2004. Adding to this the annual costs of including OBD hardware on newly produced vehicles between the years 1996 and 2020 results in a total OBD cost of roughly $36.4 billion. Discounting these costs at a 7 percent rate and putting them in present value terms results in a total discounted cost of roughly $16.6 billion.

Allocating the hardware costs according to the pollutant most likely to be affected by each aspect of the OBD system (i.e., the cost of evaporative monitoring would be allocated 100% to HC control, EGR monitoring to NO_x control, etc.), results in the cost effectiveness estimates of $1974 per ton HC, $124 per ton CO, and $1974 per ton NO_x.

VII. Administrative Requirements

A. Administrative Designation

Under Executive Order 12291, EPA must judge whether a regulation is "major" and, therefore, subject to the requirement that a RIA be prepared. EPA has determined that this regulation is major; a RIA has been prepared and is available from the address shown at the beginning of this preamble.

This regulation was submitted to the Office of Management and Budget (OMB) for review as required by Executive Order 12291. Any written comments from OMB and any EPA response to those comments are in the public docket for this rulemaking.

B. Reporting and Recordkeeping Requirements

The information collection requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. An Information Collection Request document has been prepared by EPA (ICR No. 783.25) and a copy may be obtained from Sandy Farmer, Information Policy Branch; EPA; 401 M Street, SW., (PM–223Y); Washington, DC, 20460 or by calling (202) 382–2740. These requirements are not effective until OMB approves them and a technical amendment to that effect is published in the **Federal Register.**

Public reporting burden for this collection of information is estimated to vary from 650 to 700 hours per response with an average of 675 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the collection of information. These estimates are an addition to the currently approved 15,850 hours per response for this collection.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Chief, Information Policy Branch; EPA; 401 M Street, SW., (PM–223Y); Washington, DC, 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC, 20503, marked "Attention: Desk Officer for EPA."

C. Impact on Small Entities

The Regulatory Flexibility Act of 1980 requires Federal agencies to identify potentially adverse impacts of Federal regulations upon small entities. In instances where significant impacts are possible on a substantial number of these entities, agencies are required to

perform a Regulatory Analysis. EPA has determined that the regulations finalized today will not have a significant impact on a substantial number of small entities. This regulation will affect manufacturers of motor vehicles and motor vehicle engines, a group which does not contain a substantial number of small entities. Further, small motor vehicle manufacturers typically purchase emission control components developed by larger organizations. Finally, waivers are available to any manufacturer, including small manufacturers, that is unable to meet these requirements in 1994 or 1995 model years. This waiver provision should assure that small manufacturers have adequate lead time to employ available technology.

This regulation will also positively affect independent repair shops and mechanics. The standardization requirements contained in these regulations will enhance the ability of independent mechanics to diagnosis and repair malfunctions.

Therefore, as required under section 605 of the Regulatory Flexibility Act, 5 U.S.C. 601 et seq. I certify that this regulation does not have a significant impact on a substantial number of small entities.

VIII. Authority

Statutory authority for the proposed emission standards is provided by sections 202(a), 202(m), 208(c) and 301(a) of the Clean Air Act, as amended, 42 U.S.C. 7521(a), 7521(m), 7542(c), and 7601(a).

List of Subjects in 40 CFR Part 86

Administrative practice and procedure, Air pollution control, Gasoline, Incorporation by reference, Motor vehicles, Motor vehicle pollution, Reporting and recordkeeping requirements.

Dated: January 29, 1993.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, part 86 of title 40 of the Code of Federal Regulations is amended as follows:

PART 86—CONTROL OF AIR POLLUTION FROM NEW AND IN-USE MOTOR VEHICLES AND NEW AND IN-USE MOTOR VEHICLE ENGINES: CERTIFICATION AND TEST PROCEDURES

1. The authority citation for part 86 continues to read as follows:

Authority: Secs. 202, 203, 205, 206, 207, 208, 215, 216, 217, and 301(a), Clean Air Act, as amended (42 U.S.C. 7521, 7522, 7524, 7525, 7541, 7542, 7549, 7550, 7552, and 7601(a)).

Subpart A—[Amended]

2. Section 86.094–2 is amended by adding a definition for "Engine warm-up cycle," in alphabetical order, to read as follows:

§ 86.094–2 Definitions.

* * * * *

Engine warm-up cycle means sufficient vehicle operation such that the coolant temperature has risen by at least 40 °F from engine starting and reaches a minimum temperature of 160 °F.

* * * * *

3. A new § 86.094–17 is added to read as follows:

§ 86.094–17 Emission control diagnostic system for 1994 and later light-duty vehicles and light-duty trucks.

(a) All light-duty vehicles and light-duty trucks shall be equipped with an emission control diagnostic system capable of identifying, for each vehicle's useful life, the following types of deterioration or malfunction which could cause emission increases greater than or exceeding the following threshold levels as measured and calculated in accordance with test procedures set forth in subpart B of this part. Paragraphs (a)(2) and (a)(3) of this section do not apply to diesel cycle light-duty vehicles or light-duty trucks.

(1) Catalyst deterioration before it results in both an exhaust emission exceedance of 0.6 g/mi HC and an exhaust emission increase of 0.4 g/mi HC.

(2) Engine misfire before it results in an exhaust emission increase of greater than 0.4 g/mi HC, 3.4 g/mi CO, or 1.0 g/mi NO_x.

(3) Oxygen sensor deterioration before it results in an exhaust emission increase of greater than 0.2 g/mi HC, 1.7 g/mi CO, or 0.5 g/mi NO_x.

(4) Any other deterioration or malfunction within the powertrain which occurs in actual use and which results in an exhaust emission increase of greater than 0.2 g/mi HC, 1.7 g/mi CO, or 0.5 g/mi NO_x, or any vapor leak which results in an evaporative emissions increase of greater than 30.0 g/test measured over the first 24 hours of the diurnal portion of the revised evaporative emissions test procedure, in accordance with test procedures set forth in subpart B of this part, for vehicles certified to that test procedure.

(b) (1) The electronic evaporative emission purge control, if equipped, and all emission-related powertrain components connected to a computer shall, at a minimum, be monitored for circuit continuity. All components required by these regulations to be monitored shall be evaluated periodically, but no less frequently than once per Urban Dynamometer Driving Schedule as defined in 40 CFR Part 86, Appendix I, paragraph (a), or similar trip.

(2) For non-diesel cycle light-duty vehicles and light-duty trucks, the emission control diagnostic system shall at a minimum, monitor catalytic converters and oxygen sensors and shall detect misfiring cylinders.

(3) Oxygen sensor deterioration or malfunction which renders that sensor incapable of performing its function as part of the OBD system shall be identified on vehicles so equipped.

(c) The emission control diagnostic system shall incorporate a malfunction indicator light (MIL) readily visible to the vehicle operator. When illuminated, it shall display "Check Engine," "Service Engine Soon," or a similar phrase approved by the Administrator. A vehicle shall not be equipped with more than one general purpose malfunction indicator light for emission-related problems; separate specific purpose warning lights (e.g. brake system, fasten seat belt, oil pressure, etc.) are permitted. The use of red for the OBD-related malfunction indicator light is prohibited.

(d) The MIL shall illuminate and remain illuminated when any of the conditions specified in paragraphs (a) and (b) of this section are met, or whenever the engine control enters a default or secondary mode of operation. The MIL shall blink under any period of operation during which engine misfire is occurring at a level likely to cause catalyst damage as determined by the manufacturer. The MIL shall also illuminate when the vehicle's ignition is in the "key-on" position before engine starting or cranking and extinguish after engine starting if no malfunction has previously been detected. If a malfunction has previously been detected, the MIL may be extinguished if the malfunction does not reoccur during three subsequent sequential trips during which engine speed is within 375 rpm, engine load is within 10 percent, and the engine's warm-up status is the same as that under which the malfunction was first detected, and no new malfunctions have been detected.

(e) (1) The emission control diagnostic system shall record code(s) indicating the status of the emission control system. Absent the presence of any fault codes, separate status codes shall be used to identify correctly functioning

emission control systems and those emission control systems which need further vehicle operation to be fully evaluated. Fault codes shall be stored for deterioration or malfunction causing MIL illumination; the fault code shall identify the type of malfunction.

(2) For a single misfiring cylinder, the fault code(s) shall identify the cylinder; multiple misfiring cylinders need not be uniquely identified if a distinct multiple misfire fault code is stored.

(3) A fault code shall be stored when the emission control system reverts to a default or secondary mode of operation.

(4) The diagnostic system may erase a fault code if the same fault is not re-registered in at least 40 engine warm-up cycles, and the malfunction indicator light (see paragraph (d) of this section) is not illuminated for that fault code.

(f) *Available Diagnostic Signals.* (1) Upon determination of the first malfunction of any component or system, "freeze frame" engine conditions present at the time shall be stored in computer memory. Should a subsequent fuel system or misfire malfunction occur, any previously stored freeze frame conditions shall be replaced by the fuel system or misfire conditions (whichever occurs first). Stored engine conditions shall include, but are not limited to: Engine speed, open or closed loop operation, fuel system commands, coolant temperature, calculated load value, fuel pressure, vehicle speed, air flow rate, and intake manifold pressure if the information needed to determine these conditions is available to the computer. For freeze frame storage, the manufacturer shall include the most appropriate set of conditions to facilitate effective repairs. If the fault code causing the conditions to be stored is erased in accordance with paragraph (c) of this section, the stored engine conditions may also be erased.

(2) The following signals in addition to the required freeze frame information shall be made available on demand through the serial port on the standardized data link connector, if the information is available to the on-board computer or can be determined using information available to the on-board computer: Diagnostic trouble codes, engine coolant temperature, fuel control system status (closed loop, open loop, other), fuel trim, ignition timing advance, intake air temperature, manifold air pressure, air flow rate, engine RPM, throttle position sensor output value, secondary air status (upstream, downstream, or atmosphere), calculated load value, vehicle speed, and fuel pressure. The signals shall be provided in standard units based on SAE specifications incorporated by reference in paragraph (h) of this section. Actual signals shall be clearly identified separately from default value or limp home signals. In addition, the capability to perform bi-directional diagnostic control based on SAE specifications shall be made available on demand through the serial port on the standardized data link connector per SAE specifications as referenced in paragraph (h) of this section.

(3) For all emission control systems for which specific on-board evaluation tests are conducted (catalyst, oxygen sensor, etc.), the results of the most recent test performed by the vehicle, and the limits to which the system is compared shall be available through the serial data port on the standardized data link connector per SAE specifications as referenced in paragraph (h) of this section.

(4) The OBD requirements to which the vehicle is certified (i.e., California OBD II or Federal OBD), and the major emission control systems monitored by the OBD system consistent with paragraph (h)(3) of this section, shall be available through the serial data port on the standardized data link connector per SAE specifications as referenced in paragraph (h) of this section.

(g) The emission control diagnostic system is not required to evaluate components during malfunction conditions if such evaluation would result in a risk to safety or component failure.

(h) The emission control diagnostic system shall provide for standardized access and conform with the following Society of Automotive Engineers (SAE) standards. The following SAE documents are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the SAE documents may be obtained from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096–0001. Copies may be inspected at Docket No. A–90–35 at EPA's Air docket (LE–131), room 1500 M, 1st Floor, Waterside Mall, 401 M Street, SW., Washington, DC, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(1) SAE J1850 "Class B Data Communication Network Interface," (AUG91) shall be used as the on-board to off-board communications protocol. All emission related messages sent to the scan tool over a J1850 data link shall use the Cyclic Redundancy Check and the three byte header, and shall not use inter-byte separation or checksums.

(2) Basic diagnostic data (as specified in § 86.094–17(f)) shall be provided in the format and units in SAE J1979 "E/E Diagnostic Test Modes," (DEC91). Basic bi-directional diagnostic capability shall be available and be consistent with SAE J1979 messages.

(3) Fault codes shall be consistent with SAE J2012 "Recommended Format and Messages for Diagnostic Trouble Code Definitions," (MAR92) Part C.

(4) The connection interface between the OBD system and test equipment and diagnostic tools shall meet the functional requirements of SAE J1962 "Diagnostic Connector," (JUN92).

(5) Limitation of Access—Any limitation of access to the diagnostic system shall be consistent with § 86.094–18. Access to vehicle calibration data, vehicle odometer, and keyless entry codes can be limited under the provisions of § 86.094.

(i) Upon application by the manufacturer, the Administrator may waive the requirements of this section for specific components of any class or category of light-duty vehicles or light-duty trucks for model years 1994 or 1995 (or both) if compliance would be infeasible or unreasonable considering such factors as, but not limited to, technical feasibility, lead time and production cycles including phase-in or phase-out of engines or vehicle designs and programmed upgrades of computers. At a minimum, all vehicles covered by these regulations, including those receiving a waiver as described in this paragraph, shall be equipped with an OBD system meeting the California OBD I requirements, except that for the 1994 model year EPA may grant a waiver to a system less than OBD I giving consideration to such factors as manufacturer projections of very low sales volume for an engine family (e.g., 5000 or less), scheduled phase-out of significant engine technology with the 1994 model year for that engine family, and whether or not the engine, or any similar engine within the manufacturer's product line, has ever been equipped with an OBD I or similar OBD system.

(j) Demonstration of compliance with California OBD II requirements shall satisfy the requirements of this section through the 1998 model year.

4. A new § 86.094–18 is added to read as follows:

§ 86.094–18 Tampering prevention.

(a) Any vehicle with emission control computer instructions shall include features to deter modification except as authorized by the manufacturer. Any reprogrammable computer codes or operating parameters must be resistant

to tampering and the computer and any related maintenance instructions must conform to the provisions in SAE J2186 "E/E Data Link Security," (SEP91). A removable calibration memory chip shall be potted or encased in a sealed container. The SAE J2186 documents are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. A copy of SAE J2186 may be obtained from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096–0001. A copy may be inspected at Docket No. A–90–35 at EPA's Air docket (LE–131), room 1500 M, 1st Floor, Waterside Mall, 401 M Street, SW., Washington, DC, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(b) Demonstration of compliance with the tampering protection section of the California OBD II requirements shall satisfy the requirements of this section through the 1998 model year.

5. Section 86.094–21 is amended by adding paragraphs (h) and (i) to read as follows:

§ 86.094–21 Application for certification.

* * * * *

(h) For each engine family incorporating an emission control diagnostic system, the manufacturer shall submit the following information:

(1) Detailed written information fully describing the functional operation characteristics of the diagnostic system.

(2) The general method of detecting malfunctions for each emission-related powertrain component.

(i) The manufacturer shall describe provisions taken to prevent tampering with emission control computer instructions.

* * * * *

6. Section 86.094–25 is amended by removing "; and" at the end of paragraph (d)(2)(i) and adding a period in its place and by adding paragraph (d)(2)(iii) to read as follows:

§ 86.094–25 Maintenance.

* * * * *

(d) * * *

(2) * * *

(iii) Has made a determination that the OBD system of a durability data vehicle representing an engine family certifying fully to the Federal OBD requirements as specified in § 86.094–17(a) through (h) has specifically detected the problem and has illuminated the malfunction indicator light.

* * * * *

7. Section 86.094–30 is amended by adding paragraph (f) to read as follows:

§ 86.094–30 Certification.

* * * * *

(f) For engine families required to have an emission control diagnostic system, certification will not be granted if, for any emission data vehicle or other test vehicle approved by the Administrator, the malfunction indicator light does not illuminate under any of the following circumstances, or if, for any assembly line vehicle, the malfunction indicator light does not illuminate under the circumstances described in paragraph (f)(4) of this section. Only paragraph (f)(4) of this section applies for diesel cycle vehicles.

(1) A catalyst is replaced with a deteriorated or defective catalyst or electronic simulation of such resulting in both an exhaust emission exceedance of 0.6 g/mi HC and an exhaust emission increase of 0.4 g/mi HC on a normal temperature (20 to 30 °C) emission certification test.

(2) A misfire condition is induced resulting in an increase in emissions of greater than 0.4 g/mi HC or 3.4 g/mi CO or 1.0 g/mi NO_X on a normal temperature (20 to 30 °C) emission certification test.

(3) Any oxygen sensor is replaced with a deteriorated or defective oxygen sensor, or the operation of such a sensor is simulated, resulting in an increase in emissions of 0.2 g/mi HC or 1.7 g/mi CO or 0.5 g/mi NO_X on a normal temperature (20 to 30 °C) emission certification test.

(4) The electronic evaporative purge control device (if equipped) or any emission-related powertrain component connected to a computer is electrically disconnected.

* * * * *

8. Section 86.094–35 is amended by adding paragraph (i) to read as follows:

§ 86.094–35 Labeling.

* * * * *

(i) All light-duty vehicles and light-duty trucks shall comply with SAE Recommended Practices J1877 "Recommended Practice for Bar-Coded Vehicle Identification Number Label," (MAY88), and J1892 "Recommended Practice for Bar-Coded Vehicle Emission Configuration Label," (MAY88) except that label characters 3 through 7 as specified in J1892 shall be consistent with the standardized engine family name as revised by EPA for the application model year. SAE J1877 and J1892 are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096–0001. Copies may be inspected at Docket No. A–90–35 at EPA's Air Docket (LE–131), room 1500M, 1st Floor, Waterside Mall, 401 M Street, SW., Washington, DC, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

* * * * *

9. Section 86.095–30 is amended by adding paragraph (f) to read as follows:

§ 86.095–30 Certification.

* * * * *

(f) For engine families required to have an emission control diagnostic system, certification will not be granted if, for any emission data vehicle or other test vehicle approved by the Administrator, the malfunction indicator light does not illuminate under any of the following circumstances, or if, for any assembly line vehicle, the malfunction indicator light does not illuminate under the circumstances described in paragraph (f)(4) of this section. Only paragraph (f)(4) of this section applies for diesel cycle vehicles.

(1) A catalyst is replaced with a deteriorated or defective catalyst or electronic simulation of such resulting in both an exhaust emission exceedance of 0.6 g/mi HC and an exhaust emission increase of 0.4 g/mi HC on a normal temperature (20 to 30 °C) emission certification test.

(2) A misfire condition is induced resulting in an increase in emissions of greater than 0.4 g/mi HC or 3.4 g/mi CO or 1.0 g/mi NO_X on a normal temperature (20 to 30 °C) emission certification test.

(3) Any oxygen sensor is replaced with a deteriorated or defective oxygen sensor, or the operation of such a sensor is simulated, resulting in an increase in emissions of 0.2 g/mi HC or 1.7 g/mi CO or 0.5 g/mi NO_X on a normal temperature (20 to 30 °C) emission certification test.

(4) The electronic evaporative purge control device (if equipped) or any emission-related powertrain component connected to a computer is electrically disconnected.

* * * * *

10. Section 86.095–35 is amended by adding paragraph (i) to read as follows:

§ 86.095–35 Labeling.

* * * * *

(i) All light-duty vehicles and light-duty trucks shall comply with SAE Recommended Practices J1877

"Recommended Practice for Bar-Coded Vehicle Identification Number Label," (MAY88), and J1892 "Recommended Practice for Bar-Coded Vehicle Emission Configuration Label," (MAY88) except that label characters 3 through 7 as specified in J1892 shall be consistent with the standardized engine family name as revised by EPA for the applicable model year. SAE J1877 and J1892 are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096–0001. Copies may be inspected at Docket No. A–90–35 at EPA's Air Docket (LE–131), room 1500M, 1st Floor, Waterside Mall, 401 M Street, SW., Washington, DC, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

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federal register

Friday
February 19, 1993

Part X

Department of the Interior

Minerals Management Service

Outer Continental Shelf; Central Gulf of Mexico; Oil and Gas Lease Sale and Notice of Leasing Systems: Sale 142; Notices

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

Outer Continental Shelf
Central Gulf of Mexico
Oil and Gas Lease Sale 142

1. Authority. This Notice is published pursuant to t
Outer Continental Shelf (OCS) Lands Act (43 U.S.C. 1331-13
(1988)), as amended, and the regulations issued thereunder
(30 CFR Part 256).

2. Filing of Bids. Sealed bids will be received by t
Regional Director (RD), Gulf of Mexico Region, Minerals
Management Service (MMS), 1201 Elmwood Park Boulevard, New
Orleans, Louisiana 70123-2394. Bids may be delivered in p
to that address during normal business hours (8 a.m. to 4
Central Standard Time (c.s.t.)) until the bid submission d
at 10 a.m. Tuesday, March 23, 1993. Hereinafter, all time
in this Notice refer to c.s.t. unless otherwise stated. B
will not be accepted the day of bid opening, Wednesday, Ma
1993. Bids received by the RD later than the time and dat
specified above will be returned unopened to the bidders.
may not be modified or withdrawn unless written modificati
written withdrawal request is received by the RD prior to
Tuesday, March 23, 1993. Bid opening time will be 9 a.m.,
Wednesday, March 24, 1993, at the Sheraton New Orleans Hot
500 Canal Street, New Orleans, Louisiana. All bids must b
submitted and will be considered in accordance with applic
regulations, including 30 CFR Part 256. The list of restr
joint bidders which applies to this sale appeared in the F
Register at 57 FR 46194, published on October 7, 1992.

3. Method of Bidding. A separate signed bid in a sea
envelope labeled "Sealed Bid for Oil and Gas Lease Sale 14
to be opened until 9 a.m., c.s.t., Wednesday, March 24, 19
must be submitted for each block or bidding unit bid upon.
sealed envelope and the bid should contain the following
information; the company name, MMS qualification number,
number and/or name (abbreviations acceptable), and the blo
number of the block bid upon. For those blocks which must
upon as a bidding unit (see paragraph 12), all numbers of
comprising the bidding unit should appear on the sealed en
and the bid. In addition, the total amount bid must be in
dollar amounts.

4310-MR

Bidders must submit with each bid one-fifth of the cash bonus, in cash or by cashier's check, bank draft, or certified check, payable to the order of the U.S. Department of the Interior--Minerals Management Service. Also, for identification purposes, the company name and MMS qualification number, map area number and/or name (abbreviations acceptable) and the block number must appear on the check or bank draft. No bid for less than all of the unleased portions of a block or bidding unit, as referenced in paragraph 12, will be considered.

All documents must be executed in conformance with signatory authorizations on file. Partnerships also need to submit or have on file in the Gulf of Mexico regional office a list of signatories authorized to bind the partnership. Bidders submitting joint bids must state on the bid form the proportionate interest of each participating bidder, in percent to a maximum of five decimal places, e.g., 33.33333 percent. Other documents may be required of bidders under 30 CFR 256.46. Bidders are warned against violation of 18 U.S.C. 1860, prohibiting unlawful combination or intimidation of bidders.

4. Bidding, Yearly Rental, and Royalty Systems. The following bidding, yearly rental, and royalty systems apply to this sale:

(a) Bidding Systems. All bids submitted at this sale must provide for a cash bonus in the amount of $25 or more per acre or fraction thereof.

(b) Yearly Rental. All leases awarded will provide for a yearly rental payment of $3 per acre or fraction thereof.

(c) Royalty Systems. All leases will provide for a minimum royalty of $3 per acre or fraction thereof. The following royalty systems will be used in this sale. Note that the 12 1/2-percent royalty rate applies to blocks in water depths of 400 meters or greater.

(1) Leases with a 12 1/2-Percent Royalty. This royalty rate applies to blocks in water depths of 400 meters or greater as shown on map 2 (see paragraph 12). Leases issued on the blocks and bidding units offered in this area will have a fixed royalty rate of 12 1/2 percent.

(2) Leases with a 16 2/3-Percent Royalty. This royalty rate applies to blocks in water depths of less than 400 meters (see map 2). Leases issued on the blocks and bidding units offered in this area will have a fixed royalty rate of 16 2/3 percent.

5. Equal Opportunity. Each bidder must qualify for the sale by submitting prior to the bid submission deadline stated in paragraph 2, the certification required by 41 CFR 60-1.7(b) and Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967, on the Compliance Report Certification Form, Form MMS-2033 (June 1985), and the Affirmative Action Representation Form, Form MMS-2032 (June 1985). See paragraph 14(e).

6. Bid Opening. Bid opening will begin at the bid opening time stated in paragraph 2. The opening of the bids is for the sole purpose of publicly announcing bids received, and no bids will be accepted or rejected at that time. If the Department is prohibited for any reason from opening any bid before midnight on the day of Bid Opening, that bid will be returned unopened to the bidder as soon thereafter as possible.

7. Deposit of Payment. Any cash, cashier's checks, certified checks, or bank drafts submitted with a bid may be deposited by the Government in an interest-bearing account in the U.S. Treasury during the period the bids are being considered. Such a deposit does not constitute and shall not be construed as acceptance of any bid on behalf of the United States.

8. Withdrawal of Blocks. The United States reserves the right to withdraw any block from this sale prior to issuance of a written acceptance of a bid for the block.

9. Acceptance, Rejection, or Return of Bids. The United States reserves the right to reject any and all bids. In any case, no bid will be accepted, and no lease for any block or bidding unit will be awarded to any bidder, unless:

(a) the bidder has complied with all requirements of this Notice and applicable regulations;

(b) the bid is the highest valid bid; and

(c) the amount of the bid has been determined to be adequate by the authorized officer.

No bonus bid will be considered for acceptance unless it provides for a cash bonus in the amount of $25 or more per acre or fraction thereof. Any bid submitted which does not conform to the requirements of this Notice, the OCS Lands Act, as amended, and other applicable regulations may be returned to the person submitting that bid by the RD and not considered for acceptance.

10. Successful Bidders. Each person who has submitted a bid accepted by the authorized officer will be required to execute copies of the lease, pay the balance of the cash bonus bid along with the first year's annual rental for each lease issued, by electronic funds transfer in accordance with the requirements of 30 CFR 218.155, and satisfy the bonding requirements of 30 CFR 256, Subpart I.

11. Leasing Maps and Official Protraction Diagrams. Blocks or bidding units offered for lease may be located on the following Leasing Maps or Official Protraction Diagrams which may be purchased from the Gulf of Mexico regional office (see paragraph 14(a)):

(a) Outer Continental Shelf (OCS) Leasing Maps--Louisiana Nos. 1 through 12. This is a set of 29 maps which sells for $32.

(b) Outer Continental Shelf Official Protraction Diagrams. These diagrams sell for $2.00 each.

NH 15-12	Ewing Bank	(revised December 2, 1976).
NH 16-4	Mobile	(revised November 8, 1988).
NH 16-7	Viosca Knoll	(revised December 2, 1976).
NH 16-10	Mississippi Canyon	(revised December 2, 1976).
NG 15-3	Green Canyon	(revised December 2, 1976).
NG 15-6	Walker Ridge	(revised December 2, 1976).
NG 15-9	(No Name)	(revised April 27, 1989).
NG 16-1	Atwater Valley	(revised November 10, 1983).
NG 16-4	Lund	(revised August 22, 1986)
NG 16-7	(No Name)	(revised April 27, 1989).

(c) A complete set of all the above OCS Leasing Maps and Official Protraction Diagrams is available on microfiche for $5.00 per set.

12. Description of the Areas Offered for Bids.

(a) Acreages of blocks are shown on Leasing Maps and Official Protraction Diagrams. Some of these blocks, however, may be partially leased, or transected by administrative lines such as the Federal/State jurisdictional line. In these cases, the following supplemental documents to this Notice are available from the Gulf of Mexico regional office (see paragraph 14(a)).

Central Gulf of Mexico Lease Sale 142 - Final. Unleased Split Blocks and Unleased Acreage of Blocks with Aliquots or Irregular Acreage Under Lease.

(b) References to Maps 1, 2, and 3 in this Notice refer to the following maps which are available on request from the Gulf of Mexico regional office:

Map 1 entitled "Central Gulf of Mexico Lease Sale 142 - Final. Stipulations, Lease Terms, and Warning Areas."

Map 2 entitled "Central Gulf of Mexico Lease Sale 142 - Final. Bidding Systems and Bidding Units," refers largely to Royalty Rates and Bidding Units.

Map 3 entitled "Central Gulf of Mexico Lease Sale 142 - Final. Detailed Maps of Biologically Sensitive Areas," pertains to areas referenced in Stipulation No. 2.

(c) In several instances, two or more blocks have been joined together into bidding units totaling up to 5,760 acres. Any bid submitted for a bidding unit having two or more blocks must be for all of the unleased Federal acreage within all of the blocks in that bidding unit. The list of those bidding units with their total acreages appears on Map 2.

(d) The areas offered for leasing include all those blocks shown on the OCS Leasing Maps and Official Protraction Diagrams listed in paragraph 11(a), (b), and (c) except for those leased blocks described on pages 7 through 19.

January 20, 1993

Central Gulf of Mexico Leasing Update List

The following blocks have become available for leasing since publication of the preliminary notice of Sale 142 and the block update listing dated October 28, 1992. This list is being furnished for your convenience. If you have any questions regarding this please contact Ms. Pat Bryars at (504) 736-2763.

Central Planning Area

West Cameron

152
204*
217
219
220
235

West Cameron, West Addition

154
414
420

West Cameron, South Addition

521
544
612

East Cameron

80
84
85

East Cameron, South Addition

246
267
294

Vermilion South Addition

274

South Marsh Island

46

Eugene Island

9
25
115
116 (POR)

Eugene Island, South Addition

250
390
391
397

Ship Shoal

99
143
151
188

Ship Shoal, South Addition

260
261
267
286
304
305
332
346
354
362
365

South Timbalier

204

Grand Isle

57

Grand Isle, South Addition

107
108
114
120

West Delta, South Addition

125

South Pass, South and East Addition

90
92
95

Main Pass

106 (POR)
111
122
128

Main Pass, South and East Addition

231

Breton Sound

41

Vioca Knoll

987

Mississippi Canyon

25
69
113
118
329
486
518
519
538
579
580
637
926

Green Canyon

4
60
61
104
105

Atwater Valley

121
165

*District oversight caused this nonproducing lease to remain in an active status until January 1, 1993.

January 20 1993

CENTRAL GULF OF MEXICO LEASED LANDS

(1) Descriptions of blocks listed represent all Federal acreage leased unless otherwise noted.

Sabine Pass	67	146	228	293
	68	148	229	294
3	69	149	230	295
6	71	150	231	298
8	72	151	236	299
9	73	153	237	301
10	74	165	238	305
11	75	166	239	306
12	76	167	240	310
13	77	168	241	312
14	78	169	242	313
15	79	170	243	314
	82	171	244	315
West Cameron	83	172	245	318
	90	173	246	319
17	91	174	247	320
18	93	175	248	321
(SW1/4)	94	176	249	323
19	95	177	250	324
20	96	178	251	328
21	97	179	252	331
22	98	180	253	332
23	99	181	254	333
24	100	182	255	334
27	101	183	258	337
28	102	184	259	338
33	103	186	261	340
34	104	187	262	342
35	105	191	263	343
36	106	192	264	344
39	107	(S1/2)	269	351
40	108	193	272	352
41	109	194	276	359
43	110	195	277	360
44	111	196	279	363
45	112	197	280	365
46	113	198	282	368
47	114	202	283	369
48	116	203	284	370
49	118	205	285	379
53	118	206	286	380
54	129	207		382
55	130	210	West Cameron,	383
56	131	211	West Addition	385
(N1/2)	132	212		390
57	134	213	155	391
59	135	214	157	392
60	136	215	161	397
61	140	218	163	400
62	141	221	164	401
63	142	222	289	404
64	143	223	290	405
65	144	225	291	406
66	145	226	292	407

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West Cameron South Addition

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East Cameron

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(E1/2 NW1/4; NE1/4)
(Landward of 8(g) Line)
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(N1/2)
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(S1/2)
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(N1/2 N1/2)
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East Cameron, South Addition

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Vermilion

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(W1/2 NW1/4)
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(E1/2)
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Vermilion, South Addition

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South Marsh Island, North Addition

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(Landward of lease 0310 stip. Line)
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(Landward of lease 0310 stip. Line)
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(Landward of lease 0310 stip. Line)
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(Landward of lease 0310 stip Line)
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(Landward of lease 0310 stip. Line)
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South Marsh Island

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South Marsh Island, South Addition

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Eugene Island

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Line)
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(SE1/4)
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113A
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(E1/2)
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Eugene Island, South Addition

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Ship Shoal

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(S1/2 S1/2)
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(Seaward of Zone 2)
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(W1/2)
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Ship Shoal, South Addition

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South Timbalier

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(N1/2; N1/2 SW1/4)
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(NW1/4)
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South Timbalier, South Addition

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South Pelto

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Bay Marchand

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Grand Isle

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Grand Isle, South Addition

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West Delta

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(S1/2 N1/2 S1/2; S1/2 S1/2)
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(N1/2; N1/2 S1/2)
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West Delta, South Addition

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South Pass

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17
(Seaward of the 4th Supp. Decree to 1 ft. swd. of 3rd Supp. Decree)
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(Seaward of 8(g) Line)
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South Pass, South & East Addition

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66
(Seaward of 1965 Decree Line)
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Main Pass

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(N1/2; N1/2 S1/2, in Zone 2)
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(S1/2)
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(Landward of Line 1 ft. swd. of 3rd Supp. Decree)
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(Seaward of 8(g) Line)
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100
(N1/2; N1/2 N1/2 S1/2; SE1/4 NE1/4 SE1/4; E1/2 SE1/4 SE1/4)
102
103
105
106
(SW1/4 SE1/4 NE1/4; S1/2 SW1/4 NE1/4; S1/2 S1/2 NW1/4; SW1/4; W1/2 SE1/4; W1/2 E1/2 SE1/4)
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(E1/2 E1/2 NE1/4); E1/2 NE1/4 SE1/4)
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(N1/2)
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152
(Seaward of 1965 Decree Line)
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Main Pass, South & East Addition

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Breton Sound

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(W1/2 Portion Seaward of 75 Decree Line)
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Chandeleur

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(Seaward of 8(g) Line)
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(Seaward of 8(g) Line)
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Chandeleur, East Addition

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Mobile

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Viosca Knoll

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Ewing Bank

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Mississippi Canyon

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992	109	208	303	460
993	111	209	304	461
999	113	210	305	462
1000	114	211	309	463
1007	115	213	311	465
1008	116	214	312	466
	117	215	313	467
Green Canyon	119	216	314	468
	120	217	317	469
5	121	221	318	470
6	122	223	320	472
7	123	228	323	473
8	125	235	325	474
9	126	236	326	475
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53	161	259	385	518
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Atwater Valley

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Walker Ridge

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13. Lease Terms and Stipulations.

(a) Leases resulting from this sale will have initial terms as shown on Map 1 and will be on Form MMS-2005 (March 1986). Copies of the lease form are available from the Gulf of Mexico regional office (see paragraph 14(a)).

(b) The applicability of the stipulations which follow is as shown on Map 1 and Map 3 and as supplemented by references in this Notice.

Stipulation No.1--Protection of Archaeological Resources.

(This stipulation will apply to all blocks offered for lease in this sale.)

(a) "Archaeological resource" means any prehistoric or historic district, site, building, structure, or object (including shipwrecks); such term includes artifacts, records, and remains which are related to such a district, site, building, structure, or object (16 U.S.C. 470w(5)). "Operations" means any drilling, mining, or construction or placement of any structure for exploration, development, or production of the lease.

(b) If the Regional Director (RD) believes an archaeological resource may exist in the lease area, the RD will notify the lessee in writing. The lessee shall then comply with subparagraphs (1) through (3).

(1) Prior to commencing any operations, the lessee shall prepare a report, as specified by the RD, to determine the potential existence of any archaeological resource that may be affected by operations. The report, prepared by an archaeologist and a geophysicist, shall be based on an assessment of data from remote-sensing surveys and of other pertinent archaeological and environmental information. The lessee shall submit this report to the RD for review.

(2) If the evidence suggests that an archaeological resource may be present, the lessee shall either:

(i) Locate the site of any operation so as not to adversely affect the area where the archaeological resource may be; or

(ii) Establish to the satisfaction of the RD that an archaeological resource does not exist or will not be adversely affected by operations. This shall be done by further archaeological investigation, conducted by an archaeologist and a

geophysicist, using survey equipment and techniques deemed necessary by the RD. A report on the investigation shall be submitted to the RD for review.

(3) If the RD determines that an archaeological resource is likely to be present in the lease area and may be adversely affected by operations, the RD will notify the lessee immediately. The lessee shall take no action that may adversely affect the archaeological resource until the RD has told the lessee how to protect it.

(c) If the lessee discovers any archaeological resource while conducting operations on the lease area, the lessee shall report the discovery immediately to the RD. The lessee shall make every reasonable effort to preserve the archaeological resource until the RD has told the lessee how to protect it.

Stipulation No. 2--Topographic Features.

(This stipulation will be included in leases located in the areas so indicated on Maps 1 and 3 described in paragraph 12.)

The banks which cause this stipulation to be applied to blocks of the Central Gulf are:

Bank Name	No Activity Zone Defined by Isobath (meters)	Bank Name	No Activity Zone Defined by Isobath (meters)
McGrail Bank	85	Jakkula Bank	85
Bouma Bank	85	Sweet Bank[1]	85
Rezak Bank	85	Bright Bank	85
Sidner Bank	85	Geyer Bank[3]	85
Rankin Bank	85	MacNeil Bank[3]	82
Sackett Bank[2]	85	Alderdice Bank	80
Ewing Bank	85	Fishnet Bank[2]	76
Diaphus Bank[2]	85	29 Fathom Bank	64
Parker Bank	85	Sonnier Bank	55

[1]Only paragraph (a) of the stipulation applies.
[2]Only paragraphs (a) and (b) apply.
[3]Western Gulf of Mexico bank with a portion of its "3-Mile Zone" in the Central Gulf of Mexico.

(a) No activity including structures, drilling rigs, pipelines, or anchoring will be allowed within the listed isobath ("No Activity Zone" as shown on Map 3) of the banks as listed above.

(b) Operations within the area shown as "1,000-Meter Zone" on Map 3 shall be restricted by shunting all drill cuttings and drilling fluids to the bottom through a downpipe that terminates an appropriate distance, but no more than 10 meters, from the bottom.

(c) Operations within the area shown as "1-Mile Zone" on Map 3 shall be restricted by shunting all drill cuttings and drilling fluids to the bottom through a downpipe that terminates an appropriate distance, but no more than 10 meters, from the bottom. (Where there is a "1-Mile Zone" designated, the "1,000-Meter Zone" in paragraph (b) is not designated.)

(d) Operations within the area shown as "3-Mile Zone" on Map 3 shall be restricted by shunting all drill cuttings and drilling fluids from development operations to the bottom through a downpipe that terminates an appropriate distance, but no more than 10 meters, from the bottom.

Stipulation No. 3--Live Bottoms.

(To be included only on leases in the following blocks: Main Pass Area, South and East Addition, Blocks 190, 194, 198, 219-226, 244-266, 276-290; Viosca Knoll, Blocks 473-476, 521, 522, 564, 565, 566, 609, 610, 654, 692-698, 734, 778.)

For the purpose of this stipulation, "live bottom areas" are defined as seagrass communities; or those areas which contain biological assemblages consisting of such sessile invertebrates as sea fans, sea whips, hydroids, anemones, ascidians, sponges, bryozoans, or corals living upon and attached to naturally occurring hard or rocky formations with rough, broken, or smooth topography; or areas whose lithotope favors the accumulation of turtles, fishes, and other fauna.

Prior to any drilling activities or the construction or placement of any structure for exploration or development on this lease, including, but not limited to, anchoring, well drilling, and pipeline and platform placement, the lessee will submit to the Regional Director (RD) a live bottom survey report containing a bathymetry map prepared utilizing remote sensing techniques. The bathymetry map shall be prepared for the purpose of determining the presence or absence of live bottoms which could be impacted by the proposed activity. This map shall encompass such an area of the seafloor where surface disturbing activities, including anchoring, may occur.

If it is determined that the live bottoms might be adversely impacted by the proposed activity, the RD will require the lessee to undertake any measure deemed economically, environmentally,

and technically feasible to protect the pinnacle area. These measures may include, but are not limited to, the following:

(a) the relocation of operations; and

(b) the monitoring to assess the impact of the activity on the live bottoms.

Stipulation No. 4--Military Areas.

(This stipulation will be included in leases located within the Warning Areas and Eglin Water Test Areas 1 and 3, as shown on Map 1 described in paragraph 12.)

(a) Hold and Save Harmless

Whether compensation for such damage or injury might be due under a theory of strict or absolute liability or otherwise, the lessee assumes all risks of damage or injury to persons or property, which occur in, on, or above the Outer Continental Shelf (OCS) to any persons or to any property of any person or persons who are agents, employees, or invitees of the lessee, its agents, independent contractors, or subcontractors doing business with the lessee in connection with any activities being performed by the lessee in, on, or above the OCS, if such injury or damage to such person or property occurs by reason of the activities of any agency of the U. S. Government, its contractors or subcontractors, or any of their officers, agents or employees, being conducted as a part of, or in connection with the programs and activities of the command headquarters listed in the following table.

Notwithstanding any limitation of the lessee's liability in section 14 of the lease, the lessee assumes this risk whether such injury or damage is caused in whole or in part by any act or omission, regardless of negligence or fault, of the United States, its contractors or subcontractors, or any of its officers, agents, or employees. The lessee further agrees to indemnify and hold and save harmless the United States against all claims for loss, damage, or injury sustained by the lessee, or to indemnify and hold and save harmless the United States against all claims for loss, damage, or injury sustained by the agents, employees, or invitees of the lessee, its agents, or any independent contractors or subcontractors doing business with the lessee in connection with the programs and activities of the aforementioned military installation, whether the same be caused in whole or in part by the negligence or fault of the United States, its contractors, or subcontractors, or any of its

officers, agents, or employees and whether such claims might be sustained under a theory of strict or absolute liability or otherwise.

(b) Electromagnetic Emissions

The lessee agrees to control its own electromagnetic emissions and those of its agents, employees, invitees, independent contractors or subcontractors emanating from individual designated defense warning areas in accordance with requirements specified by the commander of the command headquarters listed in the following table to the degree necessary to prevent damage to, or unacceptable interference with, Department of Defense flight, testing, or operational activities, conducted within individual designated warning areas. Necessary monitoring control, and coordination with the lessee, its agents, employees, invitees, independent contractors or subcontractors, will be effected by the commander of the appropriate onshore military installation conducting operations in the particular warning area; provided, however, that control of such electromagnetic emissions shall in no instance prohibit all manner of electromagnetic communication during any period of time between a lessee, its agents, employees, invitees, independent contractors or subcontractors and onshore facilities.

(c) Operational

The lessee, when operating or causing to be operated on its behalf, boat or aircraft traffic in the individual designated warning areas shall enter into an agreement with the commander of the individual command headquarters listed in the following table, upon utilizing an individual designated warning area prior to commencing such traffic. Such an agreement will provide for positive control of boats and aircraft operating in the warning areas at all times.

Warning Areas' Command Headquarters

Warning Areas	Command Headquarters
W-155-A W-155-B (For Agreement)	Chief, Naval Air Training Naval Air Station ATTN: Lieutenant Commander Velez, USN, or Lt. Joseph Corpus Christi, Texas 78419-5100 Telephone: (512) 939-3862/3902

Warning Areas	Command Headquarters
W-155-A W-155-B (For Operational Control)	Fleet Area Control & Surveillance Facility (FACSFAC) Naval Air Station ATTN: OS1 Reser Pensacola, Florida 32508 Telephone: (904) 452-2735/4671
W-92	Naval Air Station Air Operations Department Air Traffic Division/Code 52 ATTN: ACC Thrift New Orleans, Louisiana 70146-5000 Telephone: (504) 393-3100/3101
W-453	Air National Guard - CRTC Gulfport, Mississippi/ACMI ATTN: Tech. Sgt. D. Crawford or Staff Sgt. L. Wyche Gulfport, Mississippi 39507 Telephone: (601) 867-2433
Eglin Water Test Areas 1 and 3	Air Force Development Test Center XRI ATTN: Mr. Danny Pugh Eglin AFB, Florida 32542 Telephone: (904) 882-3899/9757

14. Information to Lessees.

(a) Supplemental Documents. For copies of the various documents identified as available from the Gulf of Mexico regional office, prospective bidders should contact the Public Information Unit, Minerals Management Service, 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123-2394, either in writing or by telephone at (504) 736-2519. For additional information, contact the Regional Supervisor for Leasing and Environment at that address or by telephone at (504) 736-2759.

(b) Navigation Safety. Operations on some of the blocks offered for lease may be restricted by designation of fairways, precautionary zones, anchorages, safety zones, or traffic separation schemes established by the U.S. Coast Guard pursuant to the Ports and Waterways Safety Act (33 U.S.C. 1221 et seq.), as amended. Bidders are advised that the U.S. Coast Guard published a notice of petition for rulemaking to expand the existing safety zone around the Louisiana Offshore Oil Port (Federal Register, Vol. 57, No. 13, p.2236, January 21, 1992).

U.S. Army Corps of Engineers (COE) permits are required for construction of any artificial islands, installations, and other devices permanently or temporarily attached to the seabed located on the OCS in accordance with section 4(e) of the OCS Lands Act, as amended.

For additional information, prospective bidders should contact Lt. Commander Ken Parris, Assistant Marine Port Safety Officer, 8th Coast Guard District, Hale Boggs Federal Building, New Orleans, Louisiana 70130, (504) 589-6901. For COE information, prospective bidders should contact Mr. Ron Ventola CELMN-OD-S, Post Office Box 60267, New Orleans, Louisiana 70160-0267, (504) 862-2255.

(c) Offshore Pipelines. Bidders are advised that the Department of the Interior and the Department of Transportation have entered into a Memorandum of Understanding, dated May 6, 1976, concerning the design, installation, operation, and maintenance of offshore pipelines. Bidders should consult both Departments for regulations applicable to offshore pipelines.

(d) 8-Year Leases. Bidders are advised that any lease issued for a term of 8 years will be cancelled after 5 years, following notice pursuant to the OCS Lands Act, as amended, if within the initial 5-year period of the lease, the drilling of an exploratory well has not been initiated, or if initiated, the well has not been drilled in conformance with the approved exploration plan criteria, or if there is not a suspension of operations in effect. See 30 CFR 256.37.

(e) Affirmative Action. Revision of Department of Labor regulations on affirmative action requirements for Government contractors (including lessees) has been deferred, pending review of those regulations (see Federal Register of August 25, 1981, at 46 FR 42865 and 42968). Should changes become effective at any time before the issuance of leases resulting from this sale, section 18 of the lease form (Form MMS-2005, March 1986), would be deleted from leases resulting from this sale. In addition, existing stocks of the affirmative action forms described in paragraph 5 of this Notice contain language that would be superseded by the revised regulations at 41 CFR 60-1.5(a)(1) and 60-1.7(a)(1). Submission of Form MMS-2032 (June 1985) and Form MMS-2033 (June 1985) will not invalidate an otherwise acceptable bid, and the revised regulations' requirements will be deemed to be part of the existing affirmative action forms.

(f) Ordnance Disposal Areas. Bidders are cautioned as to the existence of two inactive ordnance disposal areas in the Mississippi Canyon area, shown on Map 1. These areas were used to dispose of ordnance of unknown quantity and composition.

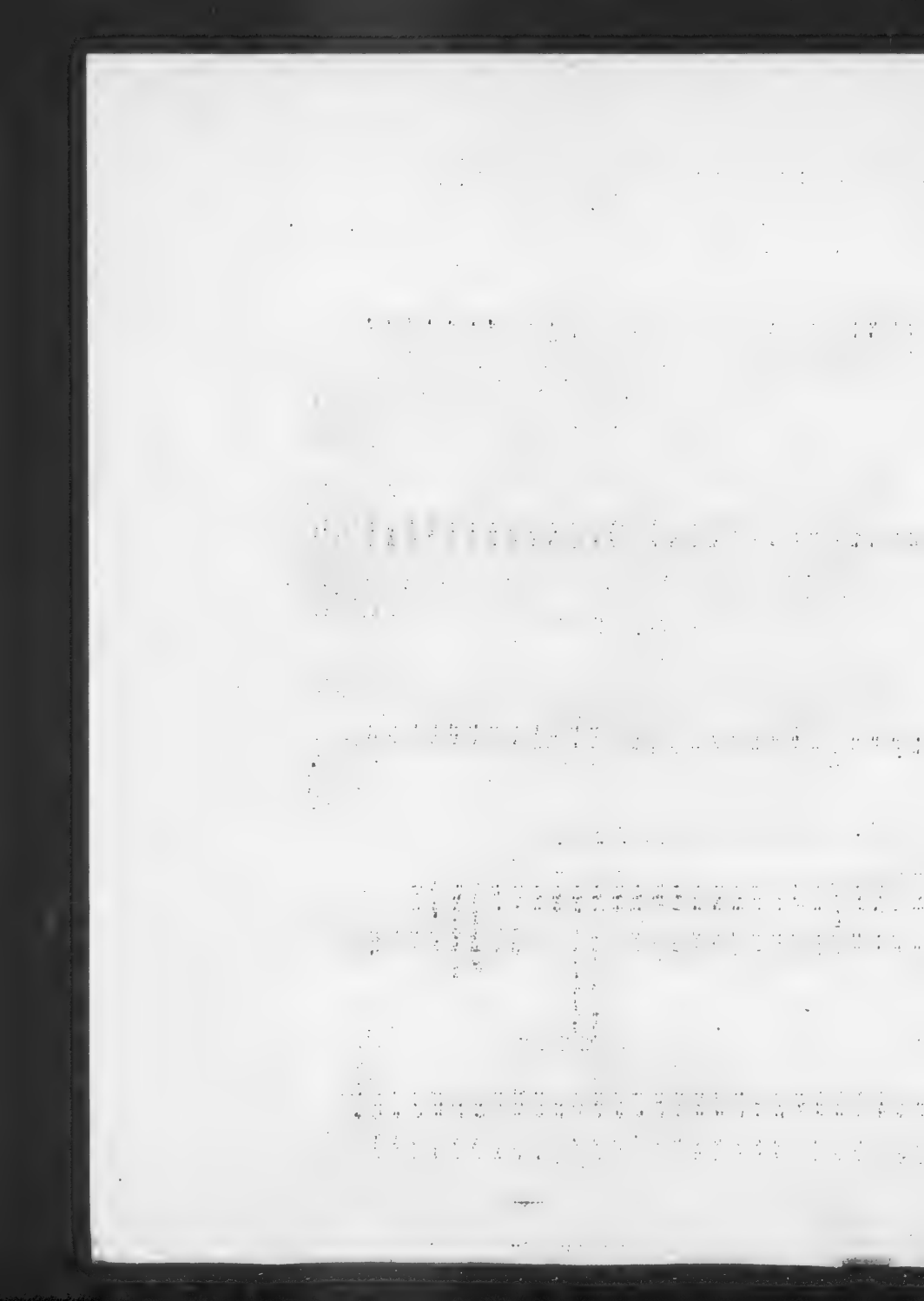
Water depths range from approximately 750 to 1,525 meters. Bottom sediments in both areas are soft, consisting of silty clays. Exploration and development activities in these areas require precautions commensurate with the potential hazards.

The U. S. Air Force has released an indeterminable amount of unexploded ordnance throughout Eglin Water Test Areas 1 and 3. The exact location of the unexploded ordnance is unknown, and lessees are advised that all lease blocks included in this sale within these water test areas should be considered potentially hazardous to drilling and platform and pipeline placement.

(g) Communications Towers. The Department of Defense, U.S. Air Force has installed seven military communications towers in the Chandeleur/Mobile/Viosca Knoll area which support Air Combat Maneuvering Instrumentation (ACMI). This project may impose certain restrictions on oil and gas activities in that area since no activity can take place within 500 feet of a tower site, and unobstructed lines of sight must be maintained between towers. The seven towers are located within Mobile, Blocks 769, 819 and 990; Viosca Knoll, Block 116; and Chandeleur Area, Blocks 33, and 61; and Chandeleur Area, East Addition, Block 39. Information and maps of the specific locations and line of sight crossings for ACMI towers may be obtained from Mr. Wallace Williams, Minerals Management Service, (504)736-2772.

(h) Archaeological Resources. Bidders are advised of the Notice to Lessees (NTL) affecting the historic shipwreck survey requirement published in the Federal Register on December 20, 1991, pages 66076-66082 with an effective date of February 17, 1992. This NTL details the survey methodology, including a more intensive survey with line spacing 50 meters apart, and report writing requirements. A Letter to Lessees (LTL) of November 30, 1990 lists those blocks identified as having a high probability for encountering historic shipwrecks. Copies of both the NTL and LTL are available from the MMS Public Information Unit. See paragraph 14(a).

(i) Proposed Rigs to Reefs. Bidders are advised that there are OCS artificial reef sites and planning sites for the Gulf of Mexico. These are generally located in water depths of less than 200 meters. While all existing and proposed sites require a permit from the U. S. Army Corps of Engineers, this "Rigs to Reefs" program is implemented through sponsorship by the affected States as listed below with the names of the designated State Artificial Reef Coordinators:



Alabama
Mr. Walter M. Tatum
(205) 968-7578

Louisiana
Mr. Rick Kasprzac
(504) 765-2375

Mississippi
Mr. Mike Buchanan
(601) 385-5860

Texas
Ms. Jan Coulbertson
(713) 474-2811

For more information, prospective bidders should contact the above listed Coordinators for their areas of interest.

Director, Minerals Management Service

Carolita Kallaur

Approved:

Assistant Secretary, Land and Minerals Management

Michael Dombeck

2/16/93
Date

[FR Doc. 93-4005 Filed 2-18-93; 8:45 am]
BILLING CODE 4310-MR-C
BILLING CODE 4310-MR-M

Billing Code: 4310-MR

DEPARTMENT OF THE INTERIOR

Minerals Management Service

Outer Continental Shelf
Central Gulf of Mexico

Notice of Leasing Systems, Sale 142

Section 8(a)(8) (43 U.S.C. 1337(a)(8)) of the Outer Continental Shelf Lands Act (OCSLA) requires that, at least 30 days before any lease sale, a Notice be submitted to the Congress and published in the Federal Register:

1. identifying the bidding systems to be used and the reasons for such use; and

2. designating the tracts to be offered under each bidding system and the reasons for such designation.

This Notice is published pursuant to these requirements.

1. Bidding systems to be used. In the Outer Continental Shelf (OCS) Sale 142, blocks will be offered under the following two bidding systems as authorized by section 8(a)(1) (43 U.S.C. 1337(a)(1)): (a) bonus bidding with a fixed 16 2/3-percent royalty on all unleased blocks in less than 400 meters of water; and (b) bonus bidding with a fixed 12 1/2-percent royalty on all remaining unleased blocks.

a. Bonus Bidding with a 16 2/3-Percent Royalty. This system is authorized by section (8)(a)(1)(A) of the OCSLA. This system has been used extensively since the passage of the OCSLA in 1953 and imposes greater risks on the lessee than systems with higher contingency payments but may yield more rewards if a commercial field is discovered. The relatively high front-end bonus payments may encourage rapid exploration.

b. Bonus Bidding with a 12 1/2-Percent Royalty. This system is authorized by section (8)(a)(1)(A) of the OCSLA. It has been chosen for certain deeper water blocks proposed for the Central Gulf of Mexico (Sale 142) because these blocks are expected to require substantially higher exploration, development, and production costs, as well as longer times before initial production, in comparison to shallow water blocks. Department of the Interior analyses indicate that the minimum economically developable discovery on a block in such high-cost areas under a 12 1/2-percent royalty system would be less than for the same blocks under a 16 2/3-percent royalty system.

As a result, more blocks may be explored and developed. In addition, the lower royalty rate system is expected to encourage more rapid production and higher economic profits. It is not anticipated, however, that the larger cash bonus bid associated with a lower royalty rate will significantly reduce competition, since the higher costs for exploration and development are the primary constraints to competition.

2. Designation of Blocks. The selection of blocks to be offered under the two systems was based on the following factors:

a. Lease terms on adjacent, previously leased blocks were considered to enhance orderly development of each field.

b. Blocks in deep water were selected for the 12 1/2-percent royalty system based on the favorable performance of this system in these high-cost areas as evidenced in our analyses.

The specific blocks to be offered under each system are shown on Map 2 entitled "Central Gulf of Mexico Lease Sale 142 - Final Bidding Systems and Bidding Units." This map is available from the Minerals Management Service, Gulf of Mexico Region, 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123-2394.

Acting Director, Minerals Management Service

Carolita Kallaur

Approved:

Acting Assistant Secretary - Land and Minerals Management

Michael Dombeck

February 16, 1993

[FR Doc. 93-4006 Filed 2-18-93; 8:45 am]

BILLING CODE 4310-MR-C

federal register

Friday
February 19, 1993

Part XI

Department of Transportation

Federal Aviation Administration

14 CFR Parts 61 and 142
Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking at Training Centers; Proposed Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 61 and 142

[Docket No. 26933; Notice No. 92–10A; and Special Federal Aviation Regulation No. 58]

RIN 2120–AA63

Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking and at Training Centers

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM); Correction.

SUMMARY: On August 11, 1992, the Department of Transportation published a Notice of Proposed Rulemaking (NPRM) (Notice 92–10; 57 FR 35888) on the use of aircraft flight simulation. This SNPRM revises the NPRM by clarifying or eliminating certain provisions found to be unclear or inappropriate for consideration at this time.

DATES: Comments on this SNPRM must be received on or before March 22, 1993.

ADDRESSES: Comments on this notice should be mailed, in triplicate, to: Federal Aviation Administration, Office of Chief Counsel, Attention: Rules Docket (AGC–10), Docket No. 26933, 800 Independence Avenue SW., Washington, DC 20591. All comments must be marked: "Docket No. 26933." Comments may be examined in room 915G on weekdays except on Federal holidays between 8:30 a.m. and 5 p.m.

FOR FURTHER INFORMATION CONTACT: Warren Robbins or Ron Myres, Regulations Branch, (AFS–850), General Aviation and Commercial Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC. 20591, Telephone (202) 267–8150.

SUPPLEMENTARY INFORMATION:

Comments Invited

Because the proposals in this SNPRM differ in some respects from the NPRM, Notice 92–10, the FAA encourages interested persons to file comments in response to this SNPRM even if they have already commented on the NPRM. The SNPRM supersedes four sections only of the NPRM; therefore, any comments previously received on those sections of the NPRM that are not being superseded will remain under consideration, while comments already received on the four sections being revised by this SNPRM will be considered but only if they relate to the revised sections. The comment period on the SNPRM will close March 22, 1993.

Interested persons are invited to comment on the proposed rule by submitting such written data, views, or arguments as they may desire. Comments should identity the regulatory docket or notice number and be submitted in triplicate to the Rules Docket at the address specified above. All comments received, as well as a report summarizing each substantive public contact with FAA personnel on this rulemaking, will be filed in the docket. The docket is available for public inspection before and after the comment closing date.

All comments received on or before the closing date will be considered by the Administrator before taking action on this proposed rulemaking. Late-filed comments will be considered to the extent practicable. The proposals contained in this notice may be changed in light of comments received.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include with their comments a pre-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 26933." When the comment is received, the postcard will be dated, time-stamped, and mailed to the commenter.

Availability of SNPRM

Any person may obtain a copy of this SNPRM and the NPRM, Notice No. 92–10, by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Inquiry Center, APA–200, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267–3484. Communications must identify Notice No. 92–10 for the NPRM and Notice No. 92–10A for the SNPRM. Persons interested in being placed on a mailing list for future proposed rules should request from the above office a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedure.

Background

On August 11, 1992, the Department of Transportation published an NPRM on the use of aircraft flight simulation. The regulatory language contained in four sections of the NPRM (Notice No. 92–10) is in need of revision. These revisions are explained more fully under the section-by-section analysis set forth below.

Section-by-Section Analysis

Section 61.187 Flight Proficiency

In the NPRM, the FAA proposed to revise paragraph (a) of § 61.187 to permit an applicant for a flight instructor certificate to receive the required instruction for the certificate in an aircraft, a flight simulator, or a flight training device. This proposed revision to paragraph (a) was inadvertent, for the FAA did not intend to revise any portion of that paragraph. Rather, it intended to add an additional provision that would permit an applicant to receive the required training in any one of the three ways described above. To accomplish this purpose, this SNPRM would restore paragraph (a) of § 61.187 without any change and would add a new paragraph (c) to § 61.187. The new paragraph would contain the proposed change that was set forth in § 61.187(a) of the NPRM, with the additional correction described below.

The NPRM incorrectly proposed that the flight instruction could be received in an aircraft, in a flight simulator, or in a flight training device used in accordance with an approved course at a training center certificated under part 142. The proposal is incorrect insofar as it fails to recognize that some or all of the training may be received in any of the following ways: (1) In an aircraft pursuant to a course given under part 61, part 121, part 135, part 141, or part 142; (2) in a flight simulator pursuant to a course approved under part 121 or part 142; or (3) in a flight training device pursuant to a course approved under part 142. This SNPRM amends the NPRM to clarify that the above options would be available to an applicant.

Section 61.197 Renewal of flight instructor certificates

The FAA inadvertently included in proposed § 61.197 certain new provisions. These provisions involve medical qualifications for the renewal of a flight instructor certificate (§ 61.197(a)(1) and (a)(2)), renewal of the certificate and its ratings without accomplishing a practical test (§ 61.197(b)(1)(i) and (ii), and (b)(2)(iv)(A) and (B)), and the use of a graduation certificate from a refresher course as a method of renewal (§ 61.197(c)). The FAA has initiated a program to review and update current part 61. The agency believes that the provisions inadvertently included in proposed § 61.197 are more appropriate for consideration in connection with its part 61 review. Accordingly, this SNPRM would withdraw the proposals described above. The FAA anticipates that these proposals, or others like them

will be part of a future rulemaking to revise part 61.

As stated in the NPRM, the purpose of proposed § 61.197 is to propose that the practical test for renewal of a flight instructor certificate be conducted, in whole or in part, in a flight simulator or flight training device. The above revisions would not affect this proposed change to § 61.197.

The other proposed changes to § 61.197 are for editorial purposes only.

Section 142.49 Training center instructor privileges and limitations

Proposed § 142.49(a) provides that a part 142 certificate holder may not allow an instructor to provide instruction "for which that instructor is qualified unless that instructor is qualified under the requirements of this subpart." On further consideration, the FAA believes that the phrase "for which that instructor is qualified" is confusing and does not add anything of substance to proposed § 142.49(a). Accordingly, this SNPRM deletes the above phrase from the proposal.

Section 142.53 Training center instructor training and testing requirements

Under proposed § 142.53(b)(2), an instructor who does not hold a medical certificate could not instruct in certain flight simulators. On reconsideration, the FAA believes that this restriction was inappropriate. The FAA has issued exemptions permitting instruction under these circumstances. It does not believe that a medical certificate is necessary provided that the instruction is conducted in a flight simulator rather than in an aircraft. Therefore, the restriction contained in the above paragraph is deleted from the proposal by this SNPRM.

Economic Evaluation

Executive Order 12291, dated February 17, 1981, directs Federal Agencies to promulgate new regulations or modify existing regulations only if potential benefits to society for each proposed change outweigh potential costs.

There are no costs associated with this SNPRM. It merely clarifies the intent of the NPRM by removing unintended restrictions, therefore, the FAA finds that further regulatory evaluation is not required. A copy of the regulatory evaluation to support the NPRM is filed in FAA Rules Docket 26933.

International Trade Impact Statement

This rule will not impose a competitive disadvantage to either U.S. air carriers doing business abroad or foreign air carriers doing business in the United States. This assessment is based on the fact that this rule will not impose additional costs on either U.S. or foreign air carriers.

Regulatory Flexibility Determination

In accordance with the Regulatory Flexibility Act of 1980, the FAA has determined that this rule will not have a significant economic impact, positive or negative, on a substantial number of small entities. This assessment is based on the regulatory evaluation of the NPRM published on August 11, 1992, and on the fact that this SNPRM will not impose any additional costs.

Federalism Implications

The regulations adopted herein will not have any direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule will not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Paperwork Reduction Act

The reporting and recordkeeping requirements associated with Notice 92–10 are being submitted to the Office of Management and Budget for approval in accordance with 44 U.S.C. chapter 35 under DOT NO: New; OMB NO: New; Title: Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking and at Training Centers. Need for Information: To adhere to the requirements for records that would need to be generated and maintained under proposed part 142. Proposed Use of Information: To provide surveillance capability over proposed training centers to insure compliance with airman training, testing, and certification requirements. Frequency: Records would have to be kept of the training center initial application, of each student, of each instructor or evaluator, and of all air carrier certificate holder clients. These records would have to be annotated subsequent to any training, testing, or checking. Burden Estimate: 5450 hours for total annual burden. Respondents: Part 142 certificate holders and certificate holder applicants. Form(s): To be determined. Average Burden Hours per Respondent: The FAA estimates that there will be 32 certificate applicants during the first year. The average burden hours are estimated as follows:

(1) To file an application—50 hours per application.

(2) To maintain a record for each student and provide that record once per student—1 hour per record.

(3) To maintain a record for instructor and evaluator and provide that record once per instructor or evaluator, excluding the initial certificate application—1 hour per record.

(4) To provide a record to each POI for each course being instructed and the instructor's name—.25 hour per record.

For further information contact: The Information Requirements Division, M–34, Office of the Secretary of Transportation, 400 Seventh Street, SW., Washington DC 20590, (202) 366–4735. Comments may be submitted to the Office of Information and Regulatory Affairs, Office of Management and Budget, New Executive Office Building, room 3228, Washington DC 20503, (202) 395–7340, Attention: Desk Officer for FAA. A copy of comments submitted to OMB also should be sent to the FAA Rules Docket listed under ADDRESSES.

Conclusion

For the reasons discussed in the preamble, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that, because this SNPRM makes minor technical changes that are mainly editorial in nature, it is not major under Executive Order 12291. Although this proposal is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979), the technical changes that it proposes would result in an impact so minimal that the proposal does not warrant a full evaluation. Further, the proposal would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. An initial regulatory evaluation of the NPRM, which includes a Regulatory Flexibility Determination and Trade Impact Analysis, has been placed in the regulatory docket. A copy may be obtained by contacting the person identified under FOR FURTHER INFORMATION CONTACT.

List of Subjects in 14 CFR Parts 61 and 142

Administrative practice and procedure, Aircraft, Airmen, Drug testing, Educational facilities, Reporting and recordkeeping requirements.

The Proposed Amendments

In consideration of the foregoing, the Federal Aviation Administration

proposes to amend parts 61 and 142 as follows:

PART 61—[AMENDED]

1. The authority citation for part 61 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1355, 1421, 1422, and 1427; 49 U.S.C. 106(g) (Revised Pub. L. 97–449; January 12, 1983).

2. Section 61.187 is amended by adding a new paragraph (c) to read as follows:

§ 61.187 Flight proficiency.

* * * * *

(c) An applicant for a flight instructor certificate may receive flight instruction—

(1) In an aircraft, in a flight simulator, or in a flight training device used in accordance with an approved course at a training center certificated under part 142 of this chapter;

(2) In an aircraft or in a flight simulator used in accordance with a course approved under part 121 of this chapter;

(3) In an aircraft used in accordance with subpart G of part 61 of this chapter if the flight instruction—

(i) Covers the subject listed in paragraph (a) of this section; and

(ii) Is given by a person authorized by the Administrator to instruct flight instructors; or

(4) In an aircraft used in accordance with a course approved under part 135 or part 141 of this chapter.

3. Section 61.197 is revised to read as follows:

§ 61.197 Renewal of flight instructor certificates.

(a) Except as provided in paragraph (b) of this section, the holder of a flight instructor certificate may renew that certificate for an additional period of 24 calendar months if that individual satisfactorily completes a practical test for—

(1) Renewal of the flight instructor certificate and rating sought; or

(2) An additional flight instructor rating.

(b) The holder of a flight instructor certificate may renew that certificate and its ratings without accomplishing a practical test, by presenting to an FAA Flight Standards District Office evidence of one of the following:

(1) A record showing that, during the preceding 24 calendar months, the instructor has served—

(i) As a company check pilot;

(ii) As a chief flight instructor;

(iii) As a company check airman or flight instructor in a part 121 or part 135 operation; or

(iv) In a comparable position involving the regular evaluation of pilots.

(2) A graduation certificate from an approved flight instructor refresher course, provided that—

(i) The course was completed prior to the expiration date of the flight instructor certificate; and

(ii) The course consists of not less than 24 hours of—

(A) Ground training;

(B) Flight training; or

(C) A combination of ground training and flight training.

(c) If an instructor satisfactorily completes the requirements of this section within 90 days prior to the expiration date of the flight instructor certificate, the instructor is considered to have completed the requirements of this section just prior to the expiration date, and the certificate will be renewed for an additional 24 calendar months beyond the expiration date.

(d) Except as allowed by paragraph (e) of this section, the practical test required by paragraph (a) of this section must be conducted in an aircraft.

(e) The practical test required by paragraph (a) of this section may be accomplished in an aircraft, in a flight simulator, or in a flight training device if it is accomplished in an approved course conducted by a training center certificated under part 142 of this chapter.

PART 142—[AMENDED]

Proposed part 142 is amended to read as follows:

4. Section 142.49(a) is revised to read as follows:

§ 142.49 Training center instructor privileges and limitations.

(a) A part 142 certificate holder may not allow an instructor to provide instruction in any course of training, testing, or checking unless that instructor is qualified under the requirements of this subpart.

* * * * *

5. Section 142.53(b)(2) is revised to read as follows:

§ 142.53 Training center instructor training and testing requirements.

* * * * *

(b) * * *

(2) An instructor may not instruct in a qualified and approved flight simulator that represents an airplane requiring two or more flight crewmembers unless that instructor has—

* * * * *

Issued in Washington, DC, on February 12, 1993.

Thomas C. Accardi,

Director, Flight Standards Service.

[FR Doc. 93–3951 Filed 2–18–93; 8:45 am]

BILLING CODE 4910–13–M

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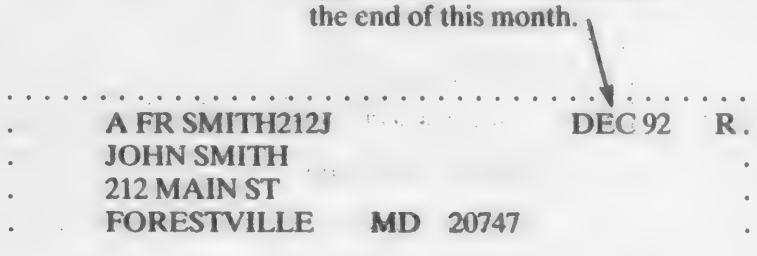

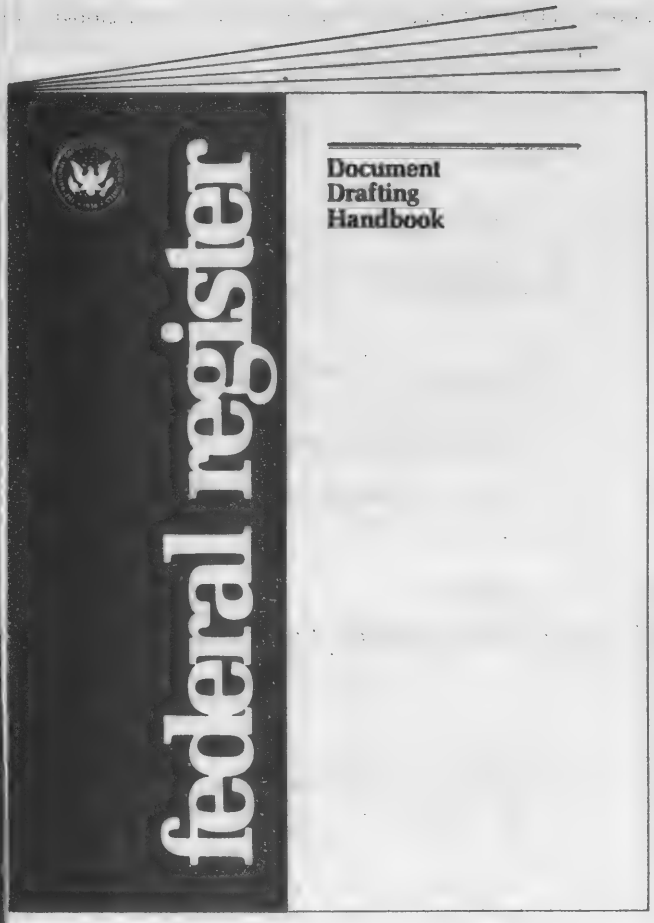

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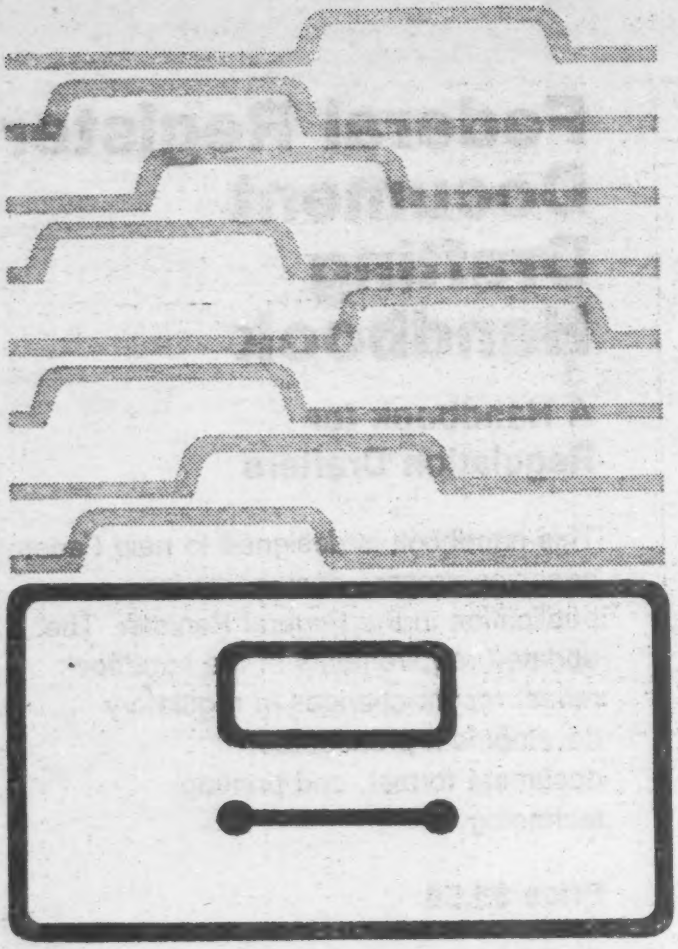

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